



TOTAL AUSTRAL

Drilling & Completion Department
Buenos Aires - Argentina



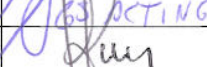

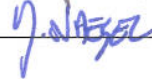
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Neuquen – Aguada Pichana
Onshore Drilling Campaign 2007

AP-237

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		4/07/08

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TOTAL AUSTRAL

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8- CEMENTING REPORTS

9- SAFETY

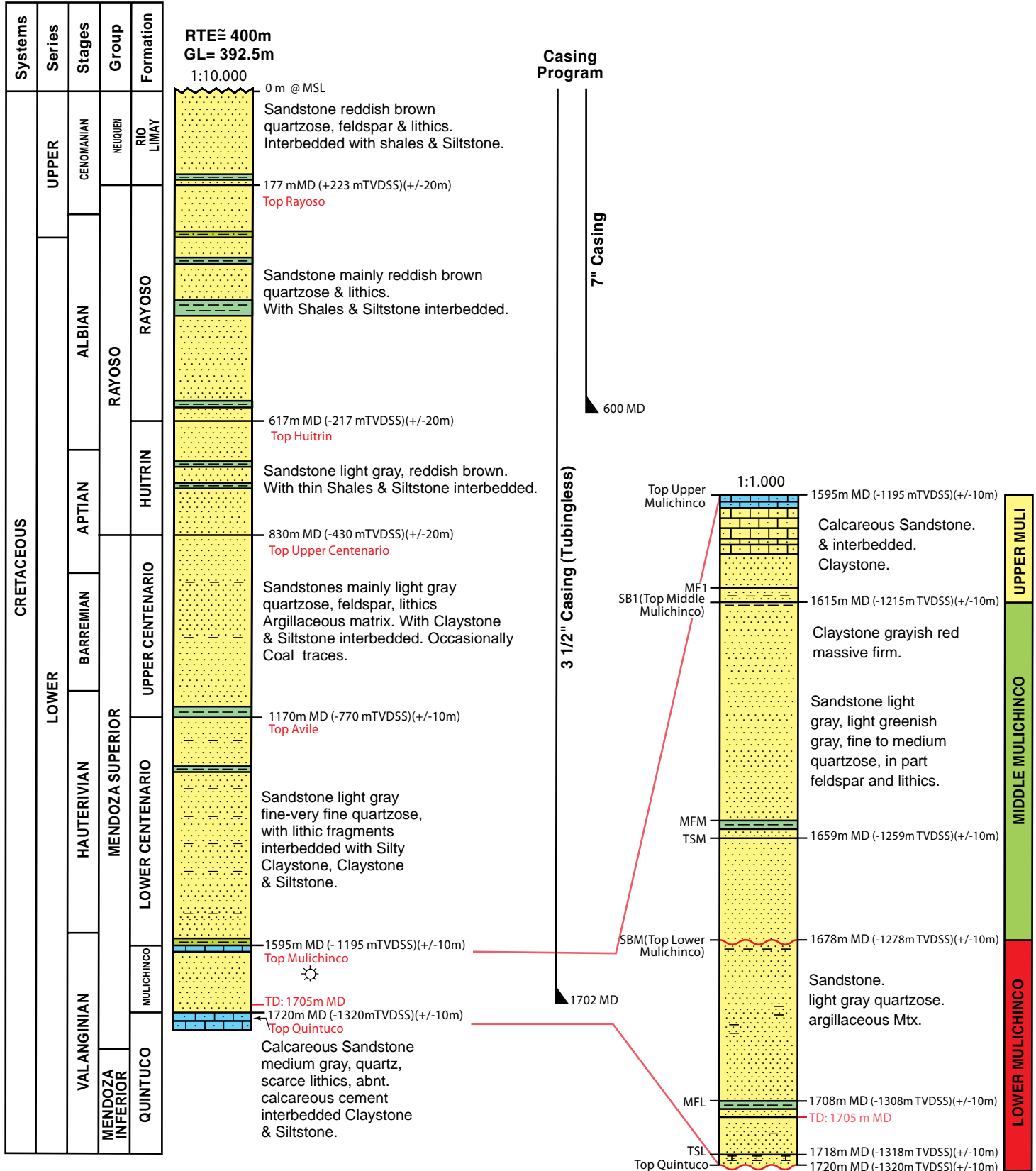
10-DAILY DRILLING REPORTS

	<p style="text-align: center;"><u>END OF ACTIVITY REPORT</u></p> <p style="text-align: center;">AGUADA PICHANA FIELD - Development Onshore Argentina</p>	<p><u>Well</u> : AP-237</p> <p><u>Rig</u> : ODE-39</p> <p><u>Start date</u> : 08/09/2007</p> <p><u>End date</u> : 22/09/2007</p>
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1) **STRATIGRAPHIC COLUMN & WELL OUTLINE**

Aguada Pichana Field

AP-237 Well / Expected Stratigraphic Column





TOTAL Austral

Directional Survey

Well Name: AP-237

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Spud Date : 9/13/2007 Objective : Flowing Gas Status : Completed
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Branches				
Branch Name	Branch UWI	Parent Branches	Pilot Hole	Comment
AP-237		AP-237	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
9/13/2007	308.40	1.00		Teledrift	308.38					2.69		0.32	
9/13/2007	816.93	0.50		Teledrift	816.87					9.35		-0.10	
9/14/2007	1,312.34	0.50		Teledrift	1,312.26					13.67		0.00	
9/14/2007	1,781.50	0.50		Teledrift	1,781.40					17.76		0.00	
9/14/2007	1,970.14	1.50		Totco	1,970.02					21.06		0.53	
9/14/2007	1,971.78	0.50		Teledrift	1,971.66					21.09		-60.96	
9/16/2007	2,290.03	0.50		Teledrift	2,289.89					23.86		0.00	
9/17/2007	2,604.99	1.50		Teledrift	2,604.79					29.36		0.32	
9/17/2007	2,729.66	1.50		Teledrift	2,729.42					32.62		0.00	
9/17/2007	2,854.33	2.00		Teledrift	2,854.04					36.43		0.40	
9/17/2007	2,979.00	2.50		Teledrift	2,978.61					41.33		0.40	
9/17/2007	3,106.96	2.50		Teledrift	3,106.44					46.91		0.00	
9/17/2007	3,379.27	2.50		Totco	3,378.49					58.78		0.00	
9/18/2007	3,730.31	1.75		Totco	3,729.30					71.80		-0.21	
9/18/2007	4,366.80	0.50		Totco	4,365.65					84.30		-0.20	
9/20/2007	5,603.67	1.50		Totco	5,602.32					105.88		0.08	

	<p style="text-align: center;"><u>END OF ACTIVITY REPORT</u></p> <p style="text-align: center;">AGUADA PICHANA FIELD - Development Onshore Argentina</p>	<p><u>Well</u> : AP-237</p> <p><u>Rig</u> : ODE-39</p> <p><u>Start date</u> : 08/09/2007</p> <p><u>End date</u> : 22/09/2007</p>
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2) **COMPLETION DIAGRAM**

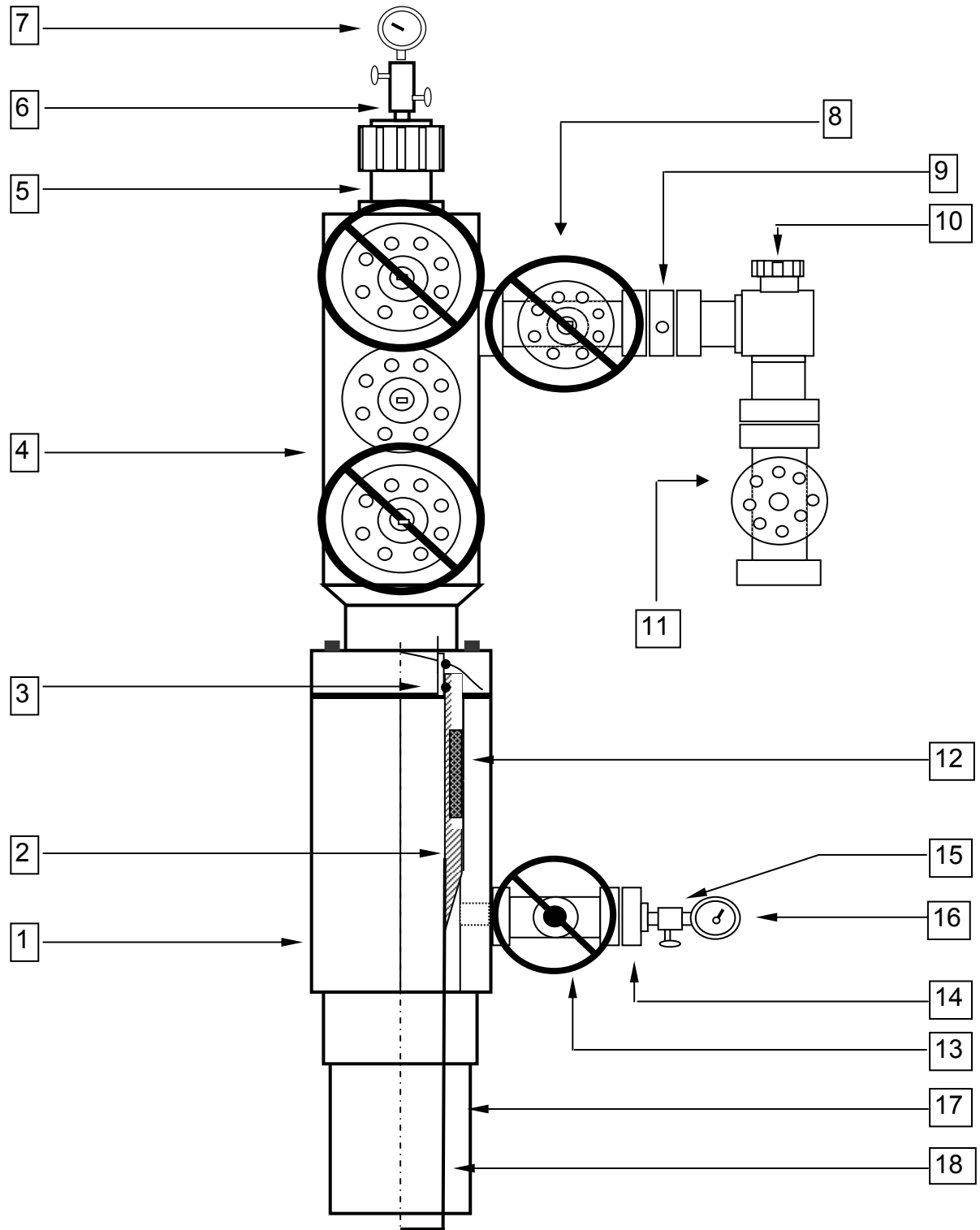


WELLHEAD LAYOUT -- AGUADA PICHANA

WELL: AP-237

DATE 22/09/07

REV 0





TOTAL AUSTRAL

COMPLETION DIAGRAM

TUBINGLESS 3.1/2"

FIELD: A PICHANA

WELL : AP-237

DATE: 22-09-07

WELL TYPE : GAS
PRODUCER

COMPLETION DATE: 22-09-07

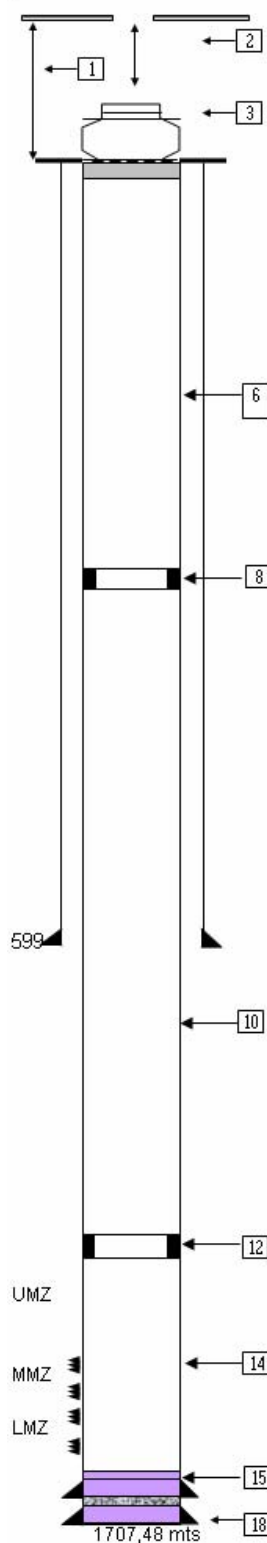
LAST WORKOVER DATE:

DEVIATION:

KOP:

PAGE:

REV.: 0



IT.	QT	DESCRIPTION	Mini ID in.	Maxi OD in.	Length m.	Bot Depth m.
1		RT / GL			6.70	
2	1	GL - TOP COMPACT HEAD	0.000	0.000	0.00	6.70
3	1	CIWV TBG HANGER MC2 3.1/2\" 10.5 LB/FT SEC 7.1/16\"-	2.984	7.062	0.25	6.95
4	1	PUP JOINT 3.1/2\" SEC L-80 - 9,2 LB/FT CR13	2.992	3.500	1.12	8.07
6	71	TUBING 3.1/2\" SEC 9,2 LB/FT L-80 CR13	2.992	3.500	686.84	694.91
	1	PUP JOINT 3.1/2\" SEC L-80 - 9,2 LB/FT CR13	2.992	3.500	3.06	697.97
7	1	PUP JOINT 3.1/2\" SEC L-80 - 9,2 LB/FT CR13	2.992	3.500	2.14	700.11
8	1	HALLIBURTON 2.81\" \"X\" NIPPLE 3.1/2\" NEW VAM	2.813	3.500	0.36	700.47
9	1	PUP JOINT 3.1/2\" SEC L-80 - 9,2 LB/FT CR13	2.992	3.500	3.10	703.57
10	92	TUBING 3.1/2\" SEC 9,2 LB/FT L-80 CR13	2.992	3.500	876.87	1,580.44
11	1	PUP JOINT 3.1/2\" SEC L-80 - 9,2 LB/FT CR13	2.992	3.500	2.18	1,582.62
12	1	HALLIBURTON 2.81\" \"XN\" NIPPLE 3.1/2\" NEW VAM	2.666	3.197	0.27	1,582.89
13	1	PUP JOINT 3.1/2\" SEC L-80 - 9,2 LB/FT CR13	2.992	3.500	2.13	1,585.02
	1	PUP JOINT 3.1/2\" SEC L-80 - 9,2 LB/FT CR14	2.992	3.500	2.11	1,587.13
	1	PUP JOINT 3.1/2\" SEC L-80 - 9,2 LB/FT CR14	2.992	3.500	3.06	1,590.19
14	11	TUBING 3.1/2\" SEC 9,2 LB/FT L-80 CR13	2.992	3.500	96.71	1,686.90
15	1	FLOAT COLLAR DOUBLE VALVE N 80 NEW VAM 10,5 L	2.992	3.500	0.59	1,687.49
16	1	TUBING 3.1/2\" SEC 9,2 LB/FT L-80 CR13	2.992	3.500	9.75	1,697.24
17	1	TUBING 3.1/2\" SEC 9,2 LB/FT L-80 CR13	2.992	3.500	9.75	1,706.99
18	1	FLOAT SHOE 3.1/2\" 10,5 LB / FT N 80 SEC	2.992	3.500	0.63	1,707.62

DHSV calibrada a 23 Bar colocada 27-10-07

REMARKS

ALL DEPTHS ARE ROTARY TABLE LEVEL REFERENCE
HALLIBURTON 2,81\" \"X\" NIPPLE UNDER TOP CEMENT
HALLIBURTON 2,81\" \"XN\" NIPPLE OVER TOP UMZ

CASING RECORD

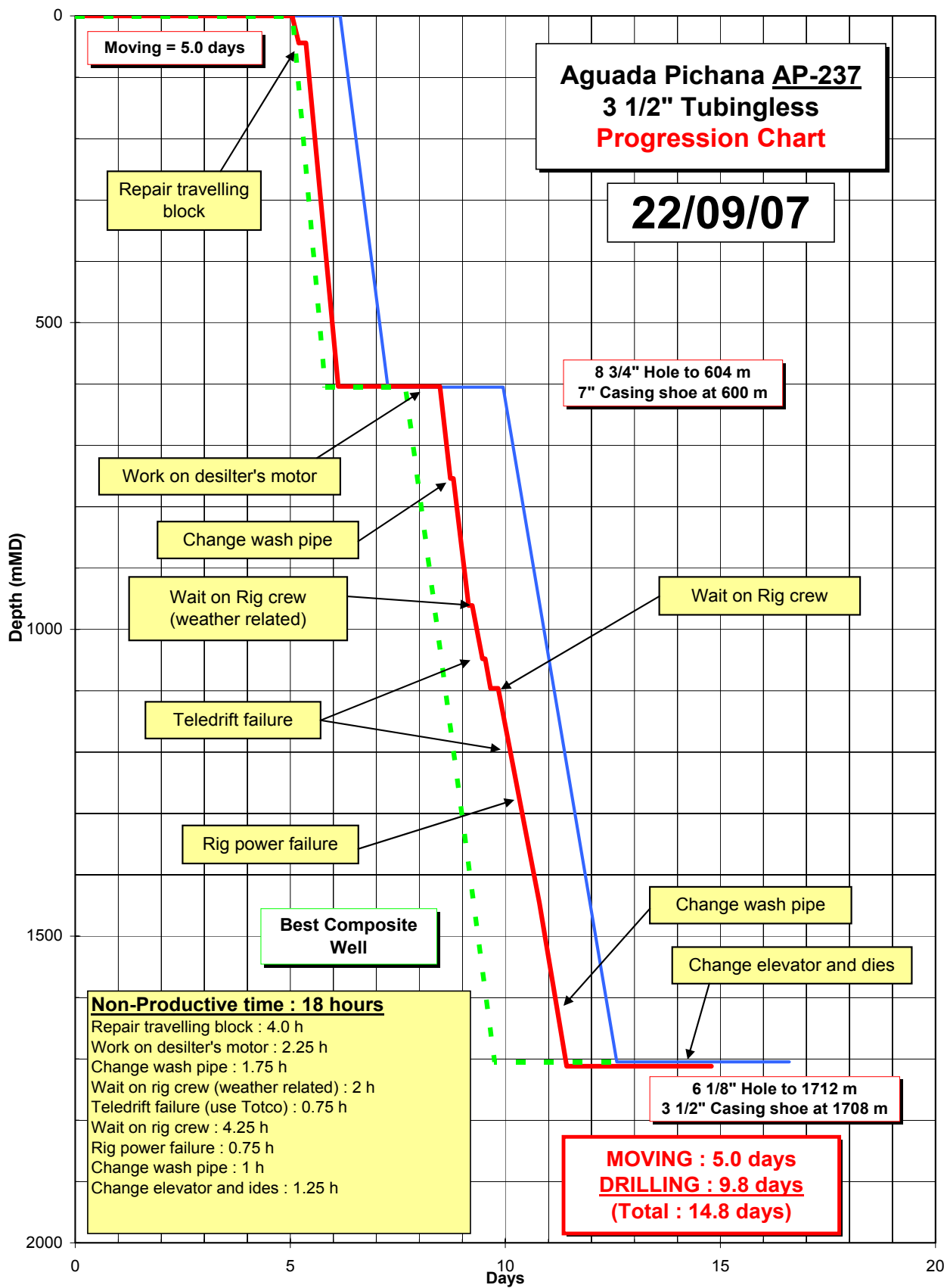
	Min ID (inch)	Maxi OD (inch)	Depth (m)	
			Top	Bottom
7\" Casing - 23 Lb/ft - N-80 SEC	6.366	7.000	0.00	599.34
TUBING 3.1/2\" SEC 9,2 LB/FT L-80 CR13	2.992	3.500	0.00	1,707.48

PERFORATIONS RECORD

RESERVOIRS	TOP	BOTTOM	H : (m)	GUNS	REMARKS
UMZ	1620.00	1635.00	15.00	2\"	5 TPP 3 AG + 2 DP
MMZ	1650.00	1655.00	5 mts	2\"	5 TPP 3 AG + 2 DP
LMZ					

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3) **PROGRESSION CHART & TIME ANALYSIS**



AP tubingless 3 1/2" Operations

Real Start date	Phase duration [h]				DDR #	Depth Plan [m]	Depth Real [m]	Operations	Phase starting day [days]		Time difference
	Best	Margin	Planned	Real					Planned	Real	
Sat 8/Sep/07 5:00											see note below
Duration:	0.00		6.16	5.04	Days			Moving	9/8/2007	9/8/2007	0d 0hr early
Sat 8/Sep/07 5:00			0.00		1	0	0				0d 0hr early
Sat 8/Sep/07 5:00			147.84	121.00	1	0	0				1d 2hr early
Thu 13/Sep/07 6:00					6	0	0				1d 2hr early
Duration:	0.00		3.79	1.58	Days	0	0	Drill 8"1/2 Phase	9/14/2007	9/13/2007	
Thu 13/Sep/07 6:00			26.64	3.75	6	605	44	M/U BHA and Drill 8 3/4" to 605 m			2d 1hr early
Thu 13/Sep/07 9:45				4.00	6	605	44				1d 21hr early
Thu 13/Sep/07 13:45				18.00	6	605	604				1d 3hr early
Fri 14/Sep/07 7:45					7	605	604				1d 3hr early
Fri 14/Sep/07 7:45			64.32	8.00	7	605	604	Circulate - POOH - RIH			3d 12hr early
Fri 14/Sep/07 15:45				4.25	7	605	604	POOH - L/D 6 1/2" DC			3d 7hr early
Duration:	0.00		0.00	1.21	Days	605	604	Run 7" Casing	9/18/2007	9/14/2007	
Fri 14/Sep/07 20:00				3.25	7	605	604	Clean cellar - Cut & L/D 9 5/8" Riser - R/U Csg. Equipment			3d 4hr early
Fri 14/Sep/07 23:15				5.50	7	605	604	Run 7" csg to 605 m			2d 23hr early
Sat 15/Sep/07 4:45				1.50	7	605	604	M/U Wellhead & Landing joint - Land it onto base plate			2d 21hr early
Sat 15/Sep/07 6:15				4.00	8	605	604	M/U Cementing head & lines - Mud conditioning - Test lines - Cmt job - R/D			2d 17hr early
Sat 15/Sep/07 10:15				14.75	8	605	604	L/D Landing joint - N/U BOP Stack, Ch.Manif. & Vent lines - Pressure Test			2d 2hr early
Sun 16/Sep/07 1:00					8	605	604				2d 2hr early
Sun 16/Sep/07 1:00					8	605	604				2d 2hr early
Duration:	0.00		6.65	5.48	Days	605	604	Drill 6"1/8 Phase	9/18/2007	9/16/2007	
Sun 16/Sep/07 1:00				7.00	8	605	604	Install wear bushing - M/U 6 1/8" bit + 4 3/4" DC & run to tag cement.			1d 19hr early
Sun 16/Sep/07 8:00				8.50	9	605	604	Safety meeting - Drillout cement - FIT			1d 11hr early
Sun 16/Sep/07 16:30				5.75	9	605	754	Drill to 1200 m			1d 5hr early
Sun 16/Sep/07 22:15				1.75	9	605	754	Circulate & wiper trip			1d 3hr early
Mon 17/Sep/07 0:00			63.36	8.50	9	1705	961	Drill to TD			3d 10hr early
Mon 17/Sep/07 8:30				2.00	10	1705	961				3d 8hr early
Mon 17/Sep/07 10:30				5.75	10	1705	1048				3d 2hr early
Mon 17/Sep/07 16:15				1.50	10	1705	1048				3d 1hr early
Mon 17/Sep/07 17:45				3.00	10	1705	1096				2d 22hr early
Mon 17/Sep/07 20:45				4.25	10	1705	1096				2d 18hr early
Tue 18/Sep/07 1:00				23.00	10	1705	1446				1d 19hr early
Wed 19/Sep/07 0:00			96.24	15.25	11	1705	1712	Circulate - Flow Check - Pump slug - Wiper Trip - POOH			5d 4hr early
Wed 19/Sep/07 15:15				8.75	12	1705	1712	Logging 4 runs			4d 19hr early
Thu 20/Sep/07 0:00				36.50	12	1705	1712	RIH with bit - Circulate - POOH and L/D DP & BHA			3d 6hr early
Duration:	0.00		0.00	1.23	Days	1705	1712	Run 3 1/2" Casing	9/24/2007	9/21/2007	
Fri 21/Sep/07 12:30				3.25	14	1705	1712	Retrieve Wear bushing - Prepare to run casing			3d 3hr early
Fri 21/Sep/07 15:45				15.75	14	1705	1712	Run 3 1/2" casing			2d 11hr early
Sat 22/Sep/07 7:30				6.50	15	1705	1712	M/U Cementing head & lines - Mud conditioning - Test lines - Cmt job - R/D			2d 5hr early
Sat 22/Sep/07 14:00					15	1705	1712				2d 5hr early
Sat 22/Sep/07 14:00				3.00	15	1705	1712	Wash Well Head Pack Off area - Run Pack Off - Test			2d 2hr early
Sat 22/Sep/07 17:00				1.00	15	1705	1712	Set TWCV			2d 1hr early
Duration:	0.00		0.00	0.25	Days	1705	1712	Completion	9/24/2007	9/22/2007	
Sat 22/Sep/07 18:00				6.00	15	1705	1712	N/D BOP - Active Lock Ring - Pull test - Install X-mas Tree			1d 19hr early
Sun 23/Sep/07 0:00					15	1705	1712	END OF DRILLING OPERATIONS			1d 19hr early
Sun 23/Sep/07 0:00					15	1705	1712				1d 19hr early
Sun 23/Sep/07 0:00					15	1705	1712				1d 19hr early
Sun 23/Sep/07 0:00					15	1705	1712				1d 19hr early
Planned hrs (DRY)	0		398	355				Planned/actual end of well date	9/24/2007	9/23/2007	1d 19hr early
								Planned/actual total days	16.60	14.8	

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



TOTAL Austral

Well Activity History

Well Name: AP-237

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 9/8/2007 End Date : 9/23/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,166,149 Final Depth : 5,616.8
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Date	Event
9/8/2007	Report Number: 1; Depth Start: <Depth Start?>; Depth progress : <Drilled Length?>; Phase: MOVING, MOVING; Rig move from AP 236 to AP 237 (10 Km)
9/9/2007	Report Number: 2; Depth Start: <Depth Start?>; Depth progress : <Drilled Length?>; Phase: MOVING, MOVING; Rig move from AP 236 to AP 237 (10 Km)
9/10/2007	Report Number: 3; Depth Start: <Depth Start?>; Depth progress : <Drilled Length?>; Phase: MOVING, MOVING; Rig move from AP 236 to AP 237.
9/11/2007	Report Number: 4; Depth Start: <Depth Start?>; Depth progress : <Drilled Length?>; Phase: MOVING, MOVING; Rig up on location. Raise mast and condition rig.
9/12/2007	Report Number: 5; Depth Start: <Depth Start?>; Depth progress : <Drilled Length?>; Phase: MOVING, MOVING; Condition rig prior to spud AP-237.
9/13/2007	Report Number: 6; Depth Start: 0.0 ftKB; Depth progress : 1,017.06 ft; Phase: 8"3/4, DRILLING; Complete pre-spud tests. Spud the well & drill formation to 310m. Control inclinasion with teledrift.
9/14/2007	Report Number: 7; Depth Start: 1,017.1 ftKB; Depth progress : 964.57 ft; Phase: 8"3/4, CASING & CEMENT; Drill from 310m to 604m. Perform wiper trip to surface. Circualte hole clean on bottom. POOH & L/D 6"1/2 BHA. RIH 7" csg in progress @42m.
9/15/2007	Report Number: 8; Depth Start: 1,981.6 ftKB; Depth progress : 0.00 ft; Phase: 8"3/4, CASING & CEMENT; RIH 7" csg to 600m. Cement same. N/U BOP's & pressure test same.
9/16/2007	Report Number: 9; Depth Start: 1,981.6 ftKB; Depth progress : 492.13 ft; Phase: 6"1/8, DRILLING; M/U 6"1/8 BHA. RIH same to TOC. Drill out cement to 598m. Mud conversion. Drill ahead to 754m.
9/17/2007	Report Number: 10; Depth Start: 2,473.8 ftKB; Depth progress : 1,122.05 ft; Phase: 6"1/8, DRILLING; Drill from 754m to 1096m. Stop operations due to rig personal.
9/18/2007	Report Number: 11; Depth Start: 3,595.8 ftKB; Depth progress : 1,148.29 ft; Phase: 6"1/8, DRILLING; Drill from 1096 to 1446m.
9/19/2007	Report Number: 12; Depth Start: 4,744.1 ftKB; Depth progress : 872.70 ft; Phase: 6"1/8, DRILLING; Drill from 1446m to 1712m. Circulate hole. Pull out to 7" csg shoe. Resume RIH in progress @728m.
9/20/2007	Report Number: 13; Depth Start: 5,616.8 ftKB; Depth progress : 0.00 ft; Phase: 6"1/8, DRILLING; RIH to bottom. Circulate hole clean. POOH & L/D drill string. WL logging in progress.
9/21/2007	Report Number: 14; Depth Start: 5,616.8 ftKB; Depth progress : 0.00 ft; Phase: 6"1/8, CASING & CEMENT; Complete WL logging. RIH 3.5" csg in progress @593m.
9/22/2007	Report Number: 15; Depth Start: 5,616.8 ftKB; Depth progress : 0.00 ft; Phase: 6"1/8, CASING & CEMENT; RIH 3.5" to 1708m. Cement same. Run pack off seal & test same. Install TWCV. N/D BOP's. N/U X-mas tree & pressure test same.



Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 9/8/2007 End Date : 9/23/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,166,149 Final Depth : 5,616.8
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Downtime Summary

Code	% Total Time (%)	Dur (hrs)
NRHAN	1.41	5.00
NRMISC	1.34	4.75
NRPER	1.76	6.25

Time Log - Contractor Downtime Details

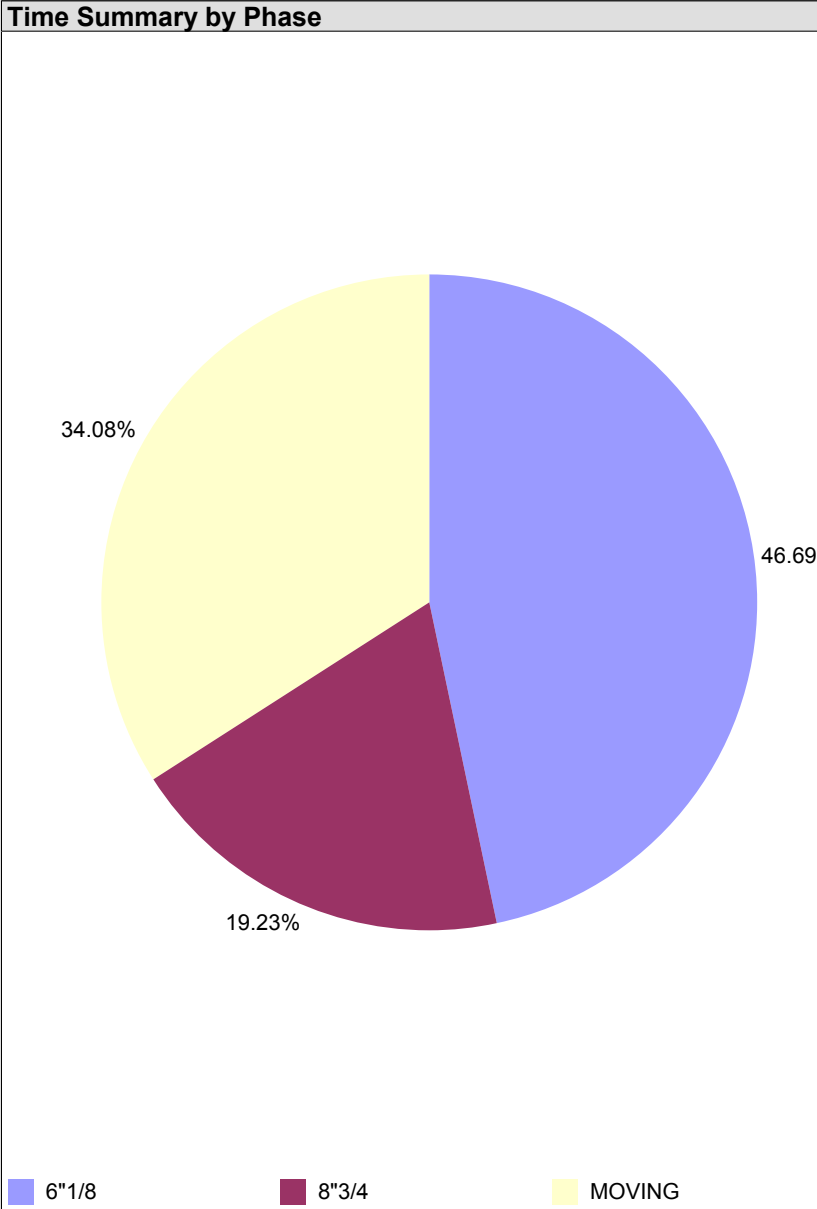
Start Date	Phase	Code	Comment	Dur (hrs)
9/13/2007 09:45	8"3/4, DRILLING	NRHAN	Repair travelling block.....R1.	4.00
9/16/2007 13:15	6"1/8, DRILLING	NRMISC	Continue to wait on desilter motor to be installed.	2.25
9/16/2007 22:00	6"1/8, DRILLING	NRMISC	Change out wash pipe. Pressure test :ok.	1.75
9/17/2007 08:30	6"1/8, DRILLING	NRPER	Rig stopped due to rig personal.	2.00
9/17/2007 20:45	6"1/8, DRILLING	NRPER	Rig stopped due to rig personal.	3.25
9/18/2007 00:00	6"1/8, DRILLING	NRPER	Waiting on rig personal.	1.00
9/18/2007 01:30	6"1/8, DRILLING	NRMISC	Rig power failure.	0.50
9/18/2007 07:15	6"1/8, DRILLING	NRMISC	Rig power failure.	0.25
9/19/2007 09:45	6"1/8, DRILLING	NRHAN	Change out wash pipe.	1.00



Country : Argentina	Slot :	Water Depth :	Activity : DEV N° 1	Total AFE+Supp (Loc) :
Field : AGUADA PICHANA	North :	Location : Onshore	Start Date : 9/8/2007	Field Est (Loc) : 1,166,149
Platform : N/A	East :	Well shape : Vert	End Date : 9/23/2007	Final Depth : 5,616.8

Duration per phase	
Phase	Time Log Hrs (hrs)
MOVING	121.00
8"3/4	68.25
6"1/8	165.75

Time Summary by Ops Code		
Code	% Total Time (%)	Dur (hrs)
ASSY	23.80	84.50
BOPASSY	4.30	15.25
BOPTEST	1.69	6.00
CAS	7.25	25.75
CEM	2.61	9.25
CEMDRL	0.77	2.75
CIRC1	1.69	6.00
DAY	10.14	36.00
DEVI	1.69	6.00
DRL	20.70	73.50
ELOG	5.99	21.25
HSE	0.70	2.50
KCK	0.85	3.00
NRHAN	1.41	5.00
NRMISC	1.34	4.75
NRPER	1.76	6.25
NSDD	0.21	0.75
NSTUB	0.35	1.25
REAM	4.30	15.25
RIGMTN	0.42	1.50
SLICK	0.28	1.00
TRIP	5.70	20.25
WHASSY	1.76	6.25
XTASSY	0.28	1.00





Service Companies Downtime Analysis

TOTAL Austral

Well Name: AP-237

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 9/8/2007 End Date : 9/23/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,166,149 Final Depth : 5,616.8
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Downtime Summary		
Code	% Total Time (%)	Dur (hrs)
NSDD	0.21	0.75
NSTUB	0.35	1.25

Time Log - Service Companies Downtime Details				
Start Date	Phase	Code	Comment	Dur (hrs)
9/17/2007 16:15	6"1/8, DRILLING	NSDD	Attempt several times to take Teledrift survey : no success.	0.50
9/18/2007 11:45	6"1/8, DRILLING	NSDD	Attempt to take Teledrift survey : No success.	0.25
9/21/2007 17:00	6"1/8, CASING & CEMENT	NSTUB	Change out dies on elevator.	0.75
9/21/2007 18:00	6"1/8, CASING & CEMENT	NSTUB	Change out elevator	0.50



TOTAL Austral

PT - NPT

Well Name: AP-237

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 9/8/2007 End Date : 9/23/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,166,149 Final Depth : 5,616.8
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Time Log Sum by Unsched Typ		
Unschd Type	Dur (hrs)	% Total Time (%)
PT	297.00	83.66
Others	40.00	11.27
NPT	18.00	5.07

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
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Productive Time Summary			DownTime Summary		
Code	Dur (hrs)	% Total Time (%)	Code	Dur (hrs)	% Total Time (%)
ASSY	84.50	23.80	NRHAN	5.00	1.41
BOPASSY	15.25	4.30	NRMISC	4.75	1.34
BOPTEST	6.00	1.69	NRPER	6.25	1.76
CAS	25.75	7.25	NSDD	0.75	0.21
CEM	9.25	2.61	NSTUB	1.25	0.35
CEMDRL	2.75	0.77			
CIRC1	6.00	1.69			
DAY	36.00	10.14			
DEVI	6.00	1.69			
DRL	73.50	20.70			
ELOG	21.25	5.99			
HSE	2.50	0.70			
KCK	3.00	0.85			
REAM	15.25	4.30			
RIGMTN	1.50	0.42			
SLICK	1.00	0.28			
TRIP	20.25	5.70			
WHASSY	6.25	1.76			
XTASSY	1.00	0.28			



TOTAL Austral

Phase Time Log Summary

Phase: 6"1/8

Well Name: AP-237

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Spud Date : 9/13/2007 Objective : Flowing Gas Status : Completed
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Phases

6"1/8, DRILLING

Phase 6"1/8	Sub-Phase DRILLING	Planned Start Depth ... 1,984.9	Planned End Depth (...) 5,593.8	Actual Start Depth (ft... 1,981.6	Actual End Depth (ft... 5,616.8
P50 Dur (days) 5.40	P90 Dur (days)	P90 Cum Days (d... 4.66	P10 Dur (days) 12.41	P10 Cum Days (d... 9/16/2007	Actual Start Date 9/21/2007
P50 Cost	P90 Cost	P10 Cost	Cum Cost(Loc) 766,414	Cum Cost Var ML -766,414	Mud Cost(Loc)

Summary

6"1/8, CASING & CEMENT

Phase 6"1/8	Sub-Phase CASING & CEMENT	Planned Start Depth ... 5,593.8	Planned End Depth (...) 5,593.8	Actual Start Depth (ft... 5,616.8	Actual End Depth (ft... 5,616.8	
P50 Dur (days) 1.36	P90 Dur (days)	P90 Cum Days (d...)	P10 Dur (days) 1.16	P10 Cum Days (d... 13.57	Actual Start Date 9/21/2007	Actual End Date 9/23/2007
P50 Cost	P90 Cost	P10 Cost	Cum Cost(Loc) 1,166,149	Cum Cost Var ML -1,166,149	Mud Cost(Loc)	

Summary

Time Log Summary grouped by Phase

Code	User Code	Unschd Type	Dur (hrs)
BOPASSY	3	PT	2.50
BOPASSY	5	PT	4.75
CAS	5	PT	16.00
CEM	5	PT	6.25
CEMDRL	3	PT	2.75
CIRC1	3	PT	0.25
CIRC1	4	PT	0.25
CIRC1	5	PT	3.00
DEVI	4	PT	4.00
DEVI	5	PT	0.25
DRL	4	PT	54.75
ELOG	5	PT	21.25
HSE	3	Others	0.25
HSE	5	Others	1.00
KCK	3	PT	0.50
KCK	4	PT	0.75
KCK	5	PT	1.25
NRHAN	4	NPT	1.00
NRMISC	3	NPT	2.25
NRMISC	4	NPT	2.50
NRPER	4	NPT	6.25
NSDD	4	NPT	0.75
NSTUB	5	NPT	1.25
REAM	5	PT	9.50
RIGMTN	4	Others	0.50
SLICK	5	PT	1.00
TRIP	3	PT	5.75
TRIP	5	PT	10.00
WHASSY	5	PT	4.25
XTASSY	5	PT	1.00

Time Log Unschd Typ grouped by Phase

Unschd Type	Dur (hrs)	% Total Time (%)
NPT	14.00	8
Others	1.75	1
PT	150.00	90

**TOTAL Austral****Phase Time Log Summary**

Phase: 8"3/4

Well Name: AP-237

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Spud Date : 9/13/2007 Objective : Flowing Gas Status : Completed
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Phases**8"3/4, DRILLING**

Phase 8"3/4	Sub-Phase DRILLING	Planned Start Depth ... 0.0	Planned End Depth (...) 1,984.9	Actual Start Depth (ft... 0.0	Actual End Depth (ft... 1,981.6	
P50 Dur (days) 1.69	P90 Dur (days)	P90 Cum Days (d...)	P10 Dur (days) 1.27	P10 Cum Days (d... 6.32	Actual Start Date 9/13/2007	Actual End Date 9/14/2007
P50 Cost	P90 Cost	P10 Cost	Cum Cost(Loc) 349,890	Cum Cost Var ML -349,890	Mud Cost(Loc)	

Summary**8"3/4, CASING & CEMENT**

Phase 8"3/4	Sub-Phase CASING & CEMENT	Planned Start Depth ... 1,984.9	Planned End Depth (...) 1,984.9	Actual Start Depth (ft... 1,017.1	Actual End Depth (ft... 1,981.6	
P50 Dur (days) 2.21	P90 Dur (days)	P90 Cum Days (d... 1.43	P10 Dur (days) 1.43	P10 Cum Days (d... 7.75	Actual Start Date 9/14/2007	Actual End Date 9/16/2007
P50 Cost	P90 Cost	P10 Cost	Cum Cost(Loc) 551.621	Cum Cost Var ML -551.621	Mud Cost(Loc)	

Summary**Time Log Summary grouped by Phase**

Code	User Code	Unschd Type	Dur (hrs)
BOPASSY	3	PT	8.00
BOPTST	3	PT	6.00
CAS	3	PT	9.75
CEM	3	PT	3.00
CIRC1	2	PT	0.50
CIRC1	3	PT	2.00
DEVI	2	PT	0.50
DEVI	3	PT	1.25
DRL	2	PT	18.75
HSE	3	Others	0.75
KCK	3	PT	0.50
NRHAN	2	NPT	4.00
REAM	3	PT	5.75
RIGMTN	2	Others	1.00
TRIP	3	PT	4.50
WHASSY	3	PT	2.00

Time Log Unschd Typ grouped by Phase

Unschd Type	Dur (hrs)	% Total Time (%)
NPT	4.00	6
Others	1.75	3
PT	62.50	92

**TOTAL Austral****Phase Time Log Summary****Phase: MOVING****Well Name: AP-237**

Country : Argentina	Slot :	Water Depth :	Spud Date : 9/13/2007
Field : AGUADA PICHANA	North :	Location : Onshore	Objective : Flowing Gas
Platform : N/A	East :	Well shape : Vert	Status : Completed

Phases**MOVING, MOVING**

Phase MOVING		Sub-Phase MOVING		Planned Start Depth ... 0.0	Planned End Depth (...) 0.0	Actual Start Depth (ft...	Actual End Depth (ft...
P50 Dur (days) 6.07	P90 Dur (days)	P90 Cum Days (d...	P10 Dur (days) 5.05	P10 Cum Days (d... 5.05	Actual Start Date 9/8/2007	Actual End Date 9/13/2007	
P50 Cost		P90 Cost	P10 Cost	Cum Cost(Loc) 272.407	Cum Cost Var ML -272.407	Mud Cost(Loc)	

Summary**Time Log Summary grouped by Phase**

Code	User Code	Unschd Type	Dur (hrs)
ASSY	1	PT	84.50
DAY	1	Others	36.00
HSE	2	Others	0.50

Time Log Unschd Typ grouped by Phase

Unschd Type	Dur (hrs)	% Total Time (%)
Others	36.50	30
PT	84.50	70



Time Log Summary - Bar Graph

TOTAL Austral

Well Name: AP-237

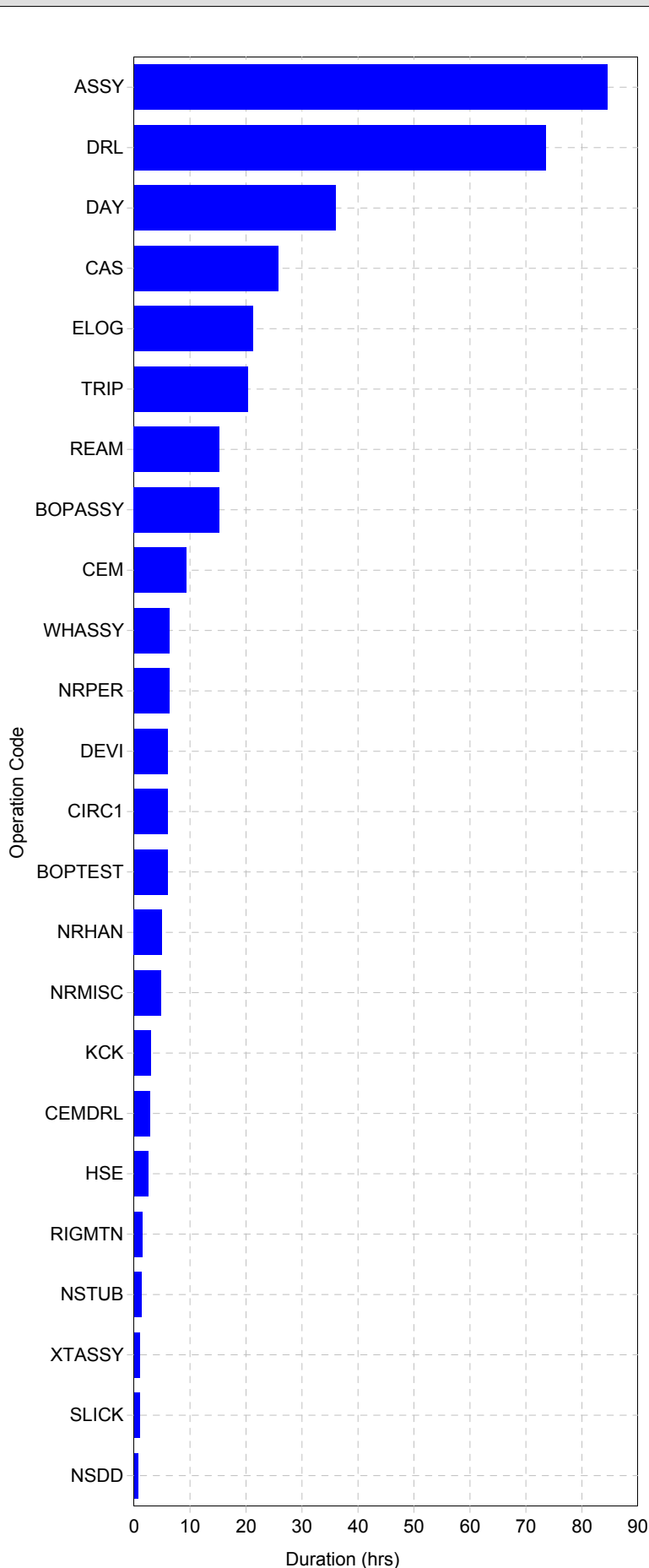
Country : Argentina
Field : AGUADA PICHANA
Platform : N/A

Slot :
North :
East :

Water Depth :
Location : Onshore
Well shape : Vert

Activity : DEV N° 1
Start Date : 9/8/2007
End Date : 9/23/2007

Total AFE+Supp (Loc) :
Field Est (Loc) : 1,166,149
Final Depth : 5,616.8



Time Summary by Ops Code

Code	% Total Time (%)	Dur (hrs)
ASSY	23.80	84.50
DRL	20.70	73.50
DAY	10.14	36.00
CAS	7.25	25.75
ELOG	5.99	21.25
TRIP	5.70	20.25
REAM	4.30	15.25
BOPASSY	4.30	15.25
CEM	2.61	9.25
WHASSY	1.76	6.25
NRPER	1.76	6.25
BOPTST	1.69	6.00
CIRC1	1.69	6.00
DEVI	1.69	6.00
NRHAN	1.41	5.00
NRMISC	1.34	4.75
KCK	0.85	3.00
CEMDRL	0.77	2.75
HSE	0.70	2.50
RIGMTN	0.42	1.50
NSTUB	0.35	1.25
SLICK	0.28	1.00
XTASSY	0.28	1.00
NSDD	0.21	0.75

	<p style="text-align: center;"><u>END OF ACTIVITY REPORT</u></p> <p style="text-align: center;">AGUADA PICHANA FIELD - Development Onshore Argentina</p>	<p><u>Well</u> : AP-237</p> <p><u>Rig</u> : ODE-39</p> <p><u>Start date</u> : 08/09/2007</p> <p><u>End date</u> : 22/09/2007</p>
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4) WELL COST

ITEM	DESCRIPTION	TOTAL AFE	TOTAL Estimated
ODE 3 1/2"	DTM Duration TVD	5.0 d 13.0 d 1700 m	5.0 d 9.8 d 1695 m
1	RIG MOB & PRE CAMP EXP	70	0
1.1	Mobilisation expenses of Rig	70	0
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	10	15
3.1	Insurance/taxes	10	15
4	WELL CONSUMABLES	474	458
4.1	Well head & X tree	70	60
4.2	Casings	230	73
4.3	Tubings & down hole equipmt	45	236
4.4	Drilling bits & mills	20	18
4.5	Core heads & spare parts	0	0
4.6	Mud products & brine	43	37
4.7	Cement & additives	50	53
4.8	Fuel, water etc.	16	0
4.9	Other consumables	0	-19
5	DRILLING / COMPLETION	873	890
5.1	Location preparation	90	77
5.2	Drilling rig contract	245	231
5.3	Completion rig contract	0	0
5.4	Mud contract	13	27
5.5	Cementing contract	25	26
5.6	Waste Management	10	1
5.7	Directional drilling	0	0
5.8	Deviation surveys	6	2
5.9	Coring services	0	0
6	Casing services	30	32
6.1	Well testing	65	42
6.2	Slickline sces	15	19
6.3	Electric line services (perfos, CBL...)	50	31
6.4	Stimulation, acid wash	200	278
6.5	Coiled tubing services	52	42
6.6	Miscellaneous drill sces	50	53
6.7	Logistic services (cars & ...)	20	30
6.8	Communications	3	1
7	GEOLOGICAL CONTRACTS	135	118
7.1	Mud logging	44	33
7.2	Electrical logging open hole	91	86
7.3	Electrical logging cased hole	0	0
7.4	Velocity survey	0	0
7.5	Geological studies, PVT, Core Analysis (non TEP)	0	0
7.6	Reservoir studies (non TEP)	0	0
8	TRANSPORT	14	117
8.1	Rig move transport	0	107
8.2	Aircrafts	0	0
8.3	Trucks (material transport)	14	6
8.4	Boats	0	3
9	TOTAL AUSTRAL & TEP ASSISTANCE	24	0
9.1	Local rig supervision (drlg+Wover+geol)	0	0
9.2	Drilling/Well assistance & studies (TEP)	16	0
9.3	Geological studies (TEP)	8	0
9.4	Reservoir studies (TEP)	0	0
	TOTAL for the project	1600	1598

	<p style="text-align: center;"><u>END OF ACTIVITY REPORT</u></p> <p style="text-align: center;">AGUADA PICHANA FIELD - Development Onshore Argentina</p>	<p><u>Well</u> : AP-237</p> <p><u>Rig</u> : ODE-39</p> <p><u>Start date</u> : 08/09/2007</p> <p><u>End date</u> : 22/09/2007</p>
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5) **BIT RECORD & BHA SUMMARY**



TOTAL Austral

Bit Summary

Well Name: AP-237

Country : Argentina	Slot :	Water Depth :	Activity : DEV N° 1	Total AFE+Supp (Loc) :
Field : AGUADA PICHANA	North :	Location : Onshore	Start Date : 9/8/2007	Field Est (Loc) : 1,166,149
Platform : N/A	East :	Well shape : Vert	End Date : 9/23/2007	Final Depth : 5,616.8

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		HC-605-Z	---	7114868	0.65	0.0	1,981.6	1,981.63	18.75	1,981.63	18.75	105.7	17.6	150	528	2,248.1	1-1-ER-N-X-0-WT-TD
2	PDC	6 1/8		HC-505	---	7302760	0.38	1,981.6	5,616.8	3,635.17	54.75	3,635.17	54.75	66.4	15.4	150	277	2,103.0	1-1-ER-N-X-0-WT-TD



TOTAL Austral

Bit Record

Well Name: AP-237

Country : Argentina	Slot :	Water Depth :	Activity : DEV N° 1	Total AFE+Supp (Loc) :
Field : AGUADA PICHANA	North :	Location : Onshore	Start Date : 9/8/2007	Field Est (Loc) : 1,166,149
Platform : N/A	East :	Well shape : Vert	End Date : 9/23/2007	Final Depth : 5,616.8

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		HC-605-Z	---	7114868	0.65	0.0	1,981.6	1,981.63	18.75	1,981.63	18.75	105.7	17.6	150	528	2,248.1	1-1-ER-N-X-0-WT-TD		
2	PDC	6 1/8		HC-505	---	7302760	0.38	1,981.6	5,616.8	3,635.17	54.75	3,635.17	54.75	66.4	15.4	150	277	2,103.0	1-1-ER-N-X-0-WT-TD		



TOTAL Austral

BHA Details

Well Name: AP-237

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 9/8/2007 End Date : 9/23/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,166,149 Final Depth : 5,616.8
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Well Shape: Vert - AP-237, 9/14/...

Schematic - Actual

BHA #1, 8"3/4 rotary drop

Bit Type PDC	Bit OD (in) 8 3/4	Len (ft) 1.64	Make	Model HC-605-Z	Serial Number 7114868
Bit Run 1	IADC Codes ---			IADC Bit Dull Out 1-1-ER-N-X-0-WT-TD	
Depth In (ftKB) 0.0	Depth Out (ftKB) 1,981.6	Depth Drilled (ft) 1,981.63	Drilling Time (hrs) 18.75	BHA ROP (ft/hr) 105.7	
WOB (max) (kips) 17.6	WOB (min) (kips) 17.6	RPM (max) (rpm) 150	RPM (min) (rpm) 150	Q (max) (gpm) 528	Q (min) (gpm) 528
BHA Objective Drill to +/- 600m.			BHA Result ok.		
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								1.64
	3 x 4-3/4" Drill collar	4 3/4								1.64
	4-3/4" Hydraulic Jar (#1400-1375)	4 3/4								1.64
	8 x 4-3/4" Drill collar	4 3/4								1.64
	XO	4 3/4								1.64
	8 x 6-1/2" Drill collar	6 1/2								1.64
	8-1/8" Stabilizer (#423)	8 1/8								1.64
	1 x 6-1/2" Drill collar	6 1/2								1.64
	6-1/2" Teledrift (1890)	6 1/2								1.64
	Bit Sub w/ Float Valve	6 1/2								1.64

Parameters

Branch	Type	Start (ftKB)	End (ftKB)	Drill Time (hrs)	Int ROP (ft/hr)	WOB (kips)	RPM (rpm)	Flow Rate (gpm)	SPP (psi)
AP-237	Drill Formation	0.0	1,017.1	12.00	84.8	17.6	150	528	2,175.6
AP-237	Drill Formation	1,017.1	1,981.6	6.75	142.9	17.6	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
9/14/2007	1,981.6	Lime mud	9.10	17.0	13.0	12.5	0.1	5.9	



TOTAL Austral

BHA Details

Well Name: AP-237

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 9/8/2007 End Date : 9/23/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,166,149 Final Depth : 5,616.8
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Well Shape: Vert - AP-237, 9/20/...
Schematic - Actual

BHA #2, 6"1/8 rotary drop

Bit Type PDC	Bit OD (in) 6 1/8	Len (ft) 1.31	Make	Model HC-505	Serial Number 7302760
Bit Run 2	IADC Codes ---			IADC Bit Dull Out 1-1-ER-N-X-0-WT-TD	
Depth In (ftKB) 1,981.6	Depth Out (ftKB) 5,616.8	Depth Drilled (ft) 3,635.17	Drilling Time (hrs) 54.75	BHA ROP (ft/hr) 66.4	
WOB (max) (kips) 15.4	WOB (min) (kips) 0.0	RPM (max) (rpm) 150	RPM (min) (rpm) 0	Q (max) (gpm) 277	Q (min) (gpm) 0
BHA Objective Drill to +/- 1712m.			BHA Result ok		
Comment					

Drill String Components

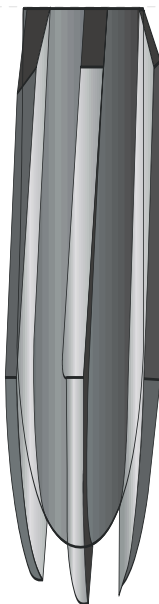
Jts	Item Description	OD (in)	ID (in)	Mass... (lbs/ft)	Grade	Drift (in)	Gauge (in)	Connections	Len (ft)	Cum Len (ft)
	3-1/2" DP	3 1/2								1.31
	DICV	3 1/2								1.31
	1 x 3-1/2" DP	3 1/2								1.31
	12 x 3-1/2" HWDP	3 1/2								1.31
	3 x 4-3/4" DC	4 3/4								1.31
	4-3/4" Hydraulic Jar (#1400-1375)	4 3/4								1.31
	17 x 4-3/4" DC	4 3/4								1.31
	5-15/16" Stab (#490)	5 15/16								1.31
	1 x 4-3/4" DC	4 3/4								1.31
	5-15/16" Stab (#492)	5 15/16								1.31
	4-3/4" SDC	4 3/4								1.31
	4-3/4" Teledrift (# 2173)	4 3/4								1.31
	Bit Sub w/ FV	4 3/4								1.31

Parameters

Branch	Type	Start (ftKB)	End (ftKB)	Drill Time (hrs)	Int ROP (ft/hr)	WOB (kips)	RPM (rpm)	Flow Rate (gpm)	SPP (psi)
AP-237	Drill Formation	1,981.6	2,473.8	5.00	98.4	15.4	150	277	1,479.4
AP-237	Drill Formation	2,473.8	3,595.8	16.00	70.1	8.8	150	277	1,638.9
AP-237	Drill Formation	3,595.8	4,744.1	19.75	58.1	13.2	150	277	1,958.0
AP-237	Drill Formation	4,744.1	5,616.8	14.00	62.3	15.4	150	277	2,103.0
AP-237		5,616.8	5,616.8	0.00		0.0	0	0	0.0

Mud Checks

Date	Depth (ftKB)	Mud Type	Density (lb/gal)	PV Calc (cp)	YP Calc (lbf/100f...)	pH	Sand	Solids (%)	OW Ratio
9/17/2007	3,595.8	Lime mud	9.18	19.0	14.0	12.5	0.1	6.6	
9/18/2007	4,599.7	Lime mud	9.18	20.0	12.0	12.5	0.1	6.6	
9/19/2007	5,616.8	Lime mud	9.35	20.0	16.0	12.5	0.1	7.4	
9/20/2007	5,616.8	Lime mud	9.35	22.0	12.0	12.5	0.1	7.7	





END OF ACTIVITY REPORT

AGUADA PICHANA FIELD - Development
Onshore Argentina


Well : **AP-237**

Rig : **ODE-39**

Start date : **08/09/2007**

End date : **22/09/2007**

6) MUD REPORT

		MUD PHASE REPORT:				8"3/4		WELL: AP - 237 Rig: ODE-39	
Last csg. Diameter: 604 m Depth: 604 m TVD: 604 m Angle: 0.5 °		Shoe: 604 m Metres drilled : 604 m		Phase duration: 3 days (from 13-Sep-07 to 15-Sep-07)		Volume drilled: 23 m³			
FLUID TYPE		POLYNOX				End phase status: <input checked="" type="checkbox"/> Completion <input type="checkbox"/> Abandonment		Csg. diameter: 7 m Shoe: 599.2 m	
Depth m Temp. In °C Temp. out °C		110 249 470 604 20 24 25 24 24 28 30 28				Solids treatment		Drilling data	
Mud weight in sg Mud Weight out sg Solids % Oil % Water % O/W ratio Sand out % Sand in %		1.07 1.06 1.08 1.10 1.08 1.07 1.09 1.09 4.1 4.1 5.3 5.9 95.9 95.9 94.7 94.1 0.15 0.15 0.15 0.15 0.1 0.1 0.1 0.1				Shaker screens: 140-140-110-110 mesh Shaker screens: 140-140-140-140 mesh Shaker screens: 140 - 140 mesh centrifuge 16.00 h 3 en 1 16.00 h		Bit: h PDC HC 605 Z 19 h PDC h Hole opening: h Average ROP: 31.79 m/h Circulating 2.5 h Reaming: h	
Flow rate l/min Marsh Viscosity s		2000 2000 2000 2000 62 55 57 58				LOT@ last csg shoe EMW: sg @ Max. temperature at TD 470 Measured 30 °C Calc. °C			
Fann 600 rpm Fann 300 rpm Fann 200 rpm Fann 100 rpm Fann 60 rpm Fann 30 rpm Fann 6 rpm Fann 3 rpm		49 48 47 47 31 30 30 30 23 23 22 22 15 14 14 14 4 4 4 4 3 3 3 3				Initial hole vol. : m³ initial tank vol. : m³ Received vol. : m³ Made up vol. : 128.70 m³ Water m³ Total handled vol. : 128.70 m³		Format. losses: 4.02 m³ Surface losses: 37.00 m³ Dumped: m³ Left behind csg: m³ Evaporation m³ Abandonment: m³ Total lost vol. : 41.02 m³	
Gel 0 lbf/100 ft² Gel 10 lbf/100 ft² Gel 30 lbf/100 ft²		3 3 3 3 6 6 6 7 8 8 9 9				Transferred volume (out of rig): m³ Reusable volume (well+tanks): 87.7 m³		Dilution Ratio l/m 61	
Ap. Visc. cP P.V. cP Y.P. lbf/100 ft² YS lbf/100 ft² tau lbf/100 ft² n. K. lbf/s*in¹⁰⁰ ft²		24.5 24 23.5 23.5 18 18 17 17 13 12 13 13 0.66 0.68 0.65 0.65 0.51 0.44 0.53 0.53				Cost and consumption			
Filtrate API 30 Filtrate 500psi 121°C HP/HT cake mm Sagging Factor WBM		6.4 6 5.8 6				Products Amount Unit Unit Price TOTAL COST kg-l/m3			
pH Pm cm³ Pf cm³ Mf cm³ MI/Pf Cl - g/l Ca++ g/l Mg++ g/l K+ g/l NaCl g/l CaCl2 g/l MgCl2 g/l KCl g/l CEC kg/m³ Glycol % Total CaSO4 g/l XS CaSO4 g/l Silicate %		12.5 12.5 12.5 12.5 12.3 12.0 12.1 12.0 2.1 1.8 1.9 1.8 2.4 2.6 2.5 2.6 1.14 1.44 1.32 1.44 1800 1800 1800 1900 200 200 200 220 42 42 42 42				ALDACIDE G lt USD 5.46 BARACARB 25 kg USD 0.80 BARACARB 5 kg USD 0.80 BARACARB 150 kg USD 0.80 BARACOR 100 lt USD 2.93 BARA-DEFOAM W300 lt USD 3.31 BARAFILM lt USD 3.18 BARASCAV-L lt USD 1.61 Cal kg USD 0.20 us\$ 610.00 23.70 BARAZAN D kg USD 13.42 Baritina kg USD 0.390 BAROFIBRE kg USD 2.69 Bentonita kg USD 0.12 us\$ 963.00 62.35 Carbonato de Calcio 200 kg USD 0.12 Cloruro de Potasio kg USD 0.82 CMC Lovis kg USD 4.95 N DRIL HT kg USD 3.20 Esterato de Aluminio kg USD 5.97 EZ-SPOT lt USD 3.94 FILTER CHEK kg USD 3.20 us\$ 3123.52 7.58 Poly Anionic Cellulose kg USD 6.92 Mixcel Fino kg USD 1.29 Mixcel Mediano kg USD 1.29 BAROLUBE GOLD SEAL lt USD 4.98 us\$ 3107.52 4.85 PAC-L kg USD 6.14 us\$ 2648.18 3.35 PAC-R kg USD 6.14 us\$ 139.38 0.18 LIGNOX PLUS kg USD 2.10 us\$ 879.69 3.25 Soda Ash kg USD 0.77 Soda Caustica kg USD 1.38 us\$ 207.00 1.17 Su Carb 5 kg USD 0.37 us\$ 462.50 9.71 Su Carb 50 kg USD 0.37 Mixcel Grueso kg USD 1.29 THERMA THIN lt USD 4.35 XCD POLYMER kg USD 19.91 XLR RATE kg USD 2.94 us\$ 1834.56 4.85			
NaBM Pm cm³ Excess Lime g/l E.S. Volts Cl- in mud g/l CaCl2 in WP g/l		7.63 7.62 7.64 7.37				Total products us\$ 13,975.35 Transporte de Material us\$ 23.80 Lead engineer 8 us\$ 382.50 us\$ 3,060.00 Second engineer 6 us\$ 348.50 us\$ 2,091.00 Costo Cementacion Cost for phase us\$ 148.61 Drilled/m: us\$ 31.67 m³drilled: us\$ 816			
Solids LGS % HGS % Solids (correct.) % 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		5.60 6.40 5.00 5.60				Problems		Solutions	
Comments: Prepared volume for the interval: 164.9 m3 (Spud Mud 36.2 m3 + 128.7 m3 POLYNOX). SU CARB 5 was used, as bridging agent, to minimize seepage losses in formation. Added XLR-RATE and BAROLUBE GOLD SEAL, maintaining concentration as per program. Maintained circuit levels by adding fresh mud in reserve tanks. Pumped HV pill, this ensured hole cleaning prev M/U BHA w/ bit 8 3/4". Drilled to 44 m. Tested Crow-o-matic. Drilled from 44 to 100 m and displaced hole mud by Polynox. Drilled from 100 to 611mts performing deciation surveys at different depths.Circulated + HV pill. Circulated. POOH to surface as wiper trip. RIH to 574 m. Reamed from 574 to 611m w/ rotation and circulation. Prepared and displaced HV pill. Circulated. POOH and laid down 6 1/2" DC. Conditioned and run 7" casing to 607,5 m (collar: 578,41m). Halliburton Co M/U and tested lines + performed cement job OK. Nipped up and tested BOP.									
Mud contractor: HALLIBURTON - BAROID Made on: 15-Sep-07 By: MARTINEZ Rene - MALVEZZI Matias									

Prepared new volume and acidconditioned mud. Prepared reduced circuit. Drilled out cement with water. Changed water to POLYNOX mud system. Added lubricant according to program. Maintained alkalinity, filtration rate and rheological values. Maintained sized carbonates concentration. Prepared new volume, Added bridging agent (BARACARB 5.25) and lubricant to the system and maintained other parameters. Prepared & Pumped HV pills to ensure hole cleaning. Cleaned pit and prepared 15 M3 of Potassium chloride brine (2%). Filtered and Transferred brine to truck of HALLIBURTON. Reduced rheological values previous to cement job. Recovered 48 m3 from cement job.

M/U BHA N*2. drill out cement to 596 m. Performed conversion water for POLYNOX. Drilled formation from 604 to 617 m. Taked SCR Pump N*1 & 2. Drilled to 1221 m. Performed deviation survey at 1218 m (-). Drilled to 1346 m. Circulated bottom up & Performed deviation survey with Totco @ 0.5°. Drilled from 1346m to 1602 m. Took Slow Circulating Rate. Drilled to 1712 m (bottom) and circulated. Pumped HV pill. Took SCR Pump #2 525 l/m 720 PSI & Pump #1 525 l/m - 710 PSI @ 1711 m. Flow check (ok) & POOH to 1015 m. Circulated BU & POOH to shoe. Continued RIH to 1696 m. Circulated & deepened to 1712 m. Performed Flow Check to Trip Tank w/ minimal rotation. Performed deviation survey w/Totco. L/D tool performing Flow check @ 600 m. Made up Schlumberger Co. y performed RUN#1: ATH - DS I - CAL - SP. RUN #2: PEX - GR. RUN #3: CMR - GR. RUN #4: MDT - GR.-. TD according to Login 1712 m / Bottom temp 146° F. M/U Weatherford Co+Ran CSG 3 1/2" 13Cr 9# Shoe set at 1708 m (174 Joints). Circulated w/1100 l/m 1300 PSI 75000#. Halliburton Co performed cement job. Washed BOP. N/U Pack off + test. M/U GEOSERVICE plug +twcv+ R/D. R/D BOP. Finished Mud Operation.



FINAL MUD REPORT

Field **Aguada Pichana**
Well **AP - 237**
Rig **ODE 39**

Depth (TMD)	1712 m	Well duration	10 days	From (13-Sep-07	to	22-Sep-07)
Metres drilled	1712 m	Drilling time	73 1/4 Hours				
Vol. ground drilled	45 m3	Reaming	Hours	Mud treatment		Hours	

Drilling mud volumes				Completion fluid volumes			
Handled volumes:	WBM	NABM	*losses volume:	WBM	NABM		
Made up	273.60	m3	form. losses		m3	Handled volume	22 m3
Received		m3	Surf. losses	77.50	m3	Dumped + surface losses	10 m3
TOTAL HANDLED	273.60	m3	Dumped	14.00	m3	Formation losses	m3
Transferred (out)		m3	Abandonment		m3	Left behind csg	12 m3
* Losses	91.50	m3	Left behind csg		m3	Transferred out	m3


PRODUCTS (drilling)		AMOUNT			Unit Price		COST		Cost %
		Used	Damaged	Total			Used	Total	
ALDACIDE G	lt	30.000		30.000	USD	5.46	163.80	163.80	0.45
BARACARB 25	kg	1362.000		1362.000	USD	0.80	1089.60	1089.60	3.02
BARACARB 5	kg	1362.000		1362.000	USD	0.80	1089.60	1089.60	3.02
BARACARB 150	kg				USD	0.80			
BARACOR 100	lt				USD	2.93			
BARA-DEFOAM W300	lt				USD	3.31			
BARAFILM	lt	60.000		60.000	USD	3.18	190.80	190.80	0.53
BARASCAV-L	lt	208.000		208.000	USD	1.61	334.88	334.88	0.93
Cal	kg	5425.000		5425.000	USD	0.20	1085.00	1085.00	3.01
BARAZAN D	kg	25.000		25.000	USD	13.42	335.50	335.50	0.93
Baritina	lt				USD	0.39			
BAROFIBRE	kg				USD	2.69			
Bentonita	kg	10025.000		10025.000	USD	0.12	1203.00	1203.00	3.33
Carbonato de Calcio 200	kg				USD	0.12			
Cloruro de Potasio	kg	500.000		500.000	USD	0.82	410.00	410.00	1.14
CMC Lovis	kg				USD	4.95			
N DRIL HT	kg				USD	3.20			
Estearato de Alumino	lt				USD	5.97			
EZ-SPOT	kg				USD	3.94			
FILTER CHEK	lt	1657.100		1657.100	USD	3.20	5302.72	5302.72	14.70
Poly Anionic Cellulose	kg				USD	6.92			
Mixel Fino	kg				USD	1.29			
Mixel Mediano	kg				USD	1.29			
BAROLUBE GOLD SEAL	kg	1872.000		1872.000	USD	4.98	9322.56	9322.56	25.84
PAC-L	kg	1044.200		1044.200	USD	6.14	6411.39	6411.39	17.77
PAC-R	kg	68.100		68.100	USD	6.14	418.13	418.13	1.16
LIGNOX PLUS	kg	563.500		563.500	USD	2.10	1183.35	1183.35	3.28
Soda Ash	kg				USD	0.77			
Soda Caustica	kg	300.000		300.000	USD	1.38	414.00	414.00	1.15
Su Carb 5	kg	2500.000		2500.000	USD	0.37	925.00	925.00	2.56
Su Carb 50	kg				USD	0.37			
Mixel Grueso	lt				USD	1.29			
THERMA THIN	lt	18.900		18.900	USD	4.35	82.22	82.22	0.23
XCD POLYMER	kg				USD	19.91			
XLR RATE	lt	2080.000		2080.000	USD	2.94	6115.20	6115.20	16.95
1. TOTAL PRODUCTS	mt	29101		29101			36076.75	36076.75	100.00
2. MUD REC. FROM ITAUX1	m3								
3. GRAND TOTAL (1 + 2)								36076.75	
4. TRANSFERRED MUD	m3								
5. TRANSFERRED MUD	m3								
6. WELL COST (3-4-5)								36076.75	
UNIT COST:	/m3 mud:	131.86			/m drilled:	21.07			/ m3 drilled: 810


TECHNICAL COST			Mud engineer:			10,268.00	Mud laboratory:			COST OF ADDITIONAL SERVICES		
SHAPE SHAKER SCREENS			MUD CLEANER SCREENS				Costo Cementing:					
Size	Nb	Cost	Size	Nb	Cost		Completion Fluid:			1,133.98		
							MUD PLANT:					
							OTHERS: (transporte)			1,467.75		


Mud contractor: **HALLIBURTON - BAROID** Made on: **22-Sep-07** By: **Martinez, R - Malvezzi M.**

	<p style="text-align: center;"><u>END OF ACTIVITY REPORT</u></p> <p style="text-align: center;">AGUADA PICHANA FIELD - Development Onshore Argentina</p>	<p><u>Well</u> : AP-237</p> <p><u>Rig</u> : ODE-39</p> <p><u>Start date</u> : 08/09/2007</p> <p><u>End date</u> : 22/09/2007</p>
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7) **CASING TALLIES**

		CASING TALLY					Rig :		ODE-39
							Well :		AP-237
							Field :		Aguada Pichana
							Date :		21-Sep-07
Stick up: 0.88 m		TD :	1,712.00 m		Rat hole 3.90 m		Total Joints 190		
TotalLength 1,708.98 m		Casing Ø:	3 1/2 in.		Mud weight: 1.12 SG		Joints to RIH 174		
		Shoe at:	1,708.10 m		Hook weight: 25,000 lbs		Excess Joints 16		
Type	Grade	Weight	OD	ID	Ext Vol	Steel Vol.	Torq Max	Torq Opt	Torq Min
1	13Cr	9 lbs/ft	3.500 in.	2.992 in.	6.27 l/m	1.74 l/m	3542	3,220 ft. lbs	2898
Joint #	Type #	Order #	Joint Length (m)	Cumul. Length (m)	Distance to RT (m)	Hook Load (Lbs)	Mud Gain		Remarks
							bbl	m3	
Float Shoe	1	1	0.62	0.62	1,707.48	25016	0	0.0	Testear
190	1	2	9.75	10.37	1,697.73	25268	0	0.0	C1 + Stop Ring a 3 m del zapato
189	1	3	9.75	20.12	1,687.98	25521	0	0.0	C2 + Stop ring
Float Collar	1	4	0.57	20.69	1,687.41	25536	0	0.0	Testear
188	1	5	9.74	30.43	1,677.67	25788	0	0.0	C3
187	1	6	9.74	40.17	1,667.93	26040	0	0.0	C4
185	1	7	9.74	49.91	1,658.19	26292	0	0.1	C5
184	1	8	9.75	59.66	1,648.44	26544	0	0.1	C6
183	1	9	9.75	69.41	1,638.69	26797	0	0.1	C7
182	1	10	9.75	79.16	1,628.94	27049	0	0.1	C8
181	1	11	9.46	88.62	1,619.48	27294	1	0.1	C9
180	1	12	9.75	98.37	1,609.73	27547	1	0.1	C10
179	1	13	9.75	108.12	1,599.98	27799	1	0.1	C11
178	1	14	9.45	117.57	1,590.53	28044	1	0.1	
Pup Joint	1	15	2.11	119.68	1,588.42	28098	1	0.1	C12
Pup Joint	1	16	3.06	122.74	1,585.36	28177	1	0.1	
Pup Joint	2	17	2.14	124.88	1,583.22	28233	1	0.1	Conjunto Armado
XN Nipple	1	18	0.32	125.2	1,582.90	28241	1	0.1	
Pup Joint	2	19	2.13	127.33	1,580.77	28296	1	0.1	
177	1	20	9.39	136.72	1,571.38	28539	1	0.1	C13
176	1	21	9.39	146.11	1,561.99	28782	1	0.1	
175	1	22	9.44	155.55	1,552.55	29027	1	0.1	C14
174	1	23	9.45	165	1,543.10	29271	1	0.1	
173	1	24	9.4	174.4	1,533.70	29515	1	0.2	C15
172	1	25	9.4	183.8	1,524.30	29758	1	0.2	
171	1	26	9.39	193.19	1,514.91	30001	1	0.2	C16
170	1	27	9.44	202.63	1,505.47	30245	1	0.2	
169	1	28	9.45	212.08	1,496.02	30490	1	0.2	C17
168	1	29	9.44	221.52	1,486.58	30734	2	0.2	
163	1	30	9.75	231.27	1,476.83	30987	2	0.3	
162	1	31	9.43	240.7	1,467.40	31231	2	0.3	
161	1	32	9.73	250.43	1,457.67	31483	2	0.3	C18
160	1	33	9.32	259.75	1,448.35	31724	2	0.3	
159	1	34	9.3	269.05	1,439.05	31965	2	0.3	
158	1	35	9.45	278.5	1,429.60	32210	2	0.3	
157	1	36	9.75	288.25	1,419.85	32462	2	0.4	C19
156	1	37	9.39	297.64	1,410.46	32705	2	0.4	
155	1	38	9.2	306.84	1,401.26	32943	2	0.4	
154	1	39	9.39	316.23	1,391.87	33186	3	0.4	
153	1	40	9.45	325.68	1,382.42	33431	3	0.4	C20
152	1	41	9.75	335.43	1,372.67	33683	3	0.4	
151	1	42	9.62	345.05	1,363.05	33932	3	0.5	
150	1	43	9.68	354.73	1,353.37	34183	3	0.5	
149	1	44	9.44	364.17	1,343.93	34427	3	0.5	C21
148	1	45	9.34	373.51	1,334.59	34669	3	0.5	
147	1	46	9.44	382.95	1,325.15	34913	3	0.5	
146	1	47	9.45	392.4	1,315.70	35158	3	0.5	
145	1	48	9.45	401.85	1,306.25	35403	3	0.6	C22
144	1	49	9.75	411.6	1,296.50	35655	4	0.6	
143	1	50	9.74	421.34	1,286.76	35907	4	0.6	
142	1	51	9.32	430.66	1,277.44	36149	4	0.6	
141	1	52	9.74	440.4	1,267.70	36401	4	0.6	C23
140	1	53	9.75	450.15	1,257.95	36653	4	0.6	
139	1	54	9.74	459.89	1,248.21	36905	4	0.7	
138	1	55	9.74	469.63	1,238.47	37157	4	0.7	

	CASING TALLY						Rig :		ODE-39
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	Shoe at: 1,708.10 m	Hook weight: 25,000 lbs	Excess Joints 16						
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Joint #	Type #	Order #	Joint Length (m)	Cumul. Length (m)	Distance to RT (m)	Hook Load (Lbs)	Mud Gain		Remarks
							bbl	m3	
137	1	56	9.22	478.85	1,229.25	37396	4	0.7	C24
136	1	57	9.45	488.3	1,219.80	37641	4	0.7	
135	1	58	9.32	497.62	1,210.48	37882	5	0.7	
164	1	59	9.38	507	1,201.10	38125	5	0.7	
133	1	60	9.75	516.75	1,191.35	38377	5	0.8	C25
132	1	61	9.75	526.5	1,181.60	38630	5	0.8	
131	1	62	9.74	536.24	1,171.86	38882	5	0.8	
130	1	63	9.75	545.99	1,162.11	39134	5	0.8	
129	1	64	9.74	555.73	1,152.37	39386	5	0.8	C26
128	1	65	9.68	565.41	1,142.69	39637	5	0.8	
127	1	66	9.74	575.15	1,132.95	39889	5	0.9	
126	1	67	9.74	584.89	1,123.21	40141	5	0.9	
125	1	68	9.14	594.03	1,114.07	40378	6	0.9	C27 / Romper circulacion. Tomar pesos.
124	1	69	9.75	603.78	1,104.32	40630	6	0.9	
123	1	70	9.69	613.47	1,094.63	40881	6	0.9	
122	1	71	9.75	623.22	1,084.88	41133	6	0.9	
121	1	72	9.3	632.52	1,075.58	41374	6	1.0	C28
120	1	73	9.69	642.21	1,065.89	41625	6	1.0	
119	1	74	9.74	651.95	1,056.15	41877	6	1.0	
118	1	75	9.7	661.65	1,046.45	42128	6	1.0	
117	1	76	9.75	671.4	1,036.70	42381	6	1.0	C30
116	1	77	9.74	681.14	1,026.96	42633	7	1.0	
115	1	78	9.75	690.89	1,017.21	42885	7	1.1	
114	1	79	9.74	700.63	1,007.47	43137	7	1.1	
113	1	80	9.75	710.38	997.72	43390	7	1.1	
112	1	81	9.74	720.12	987.98	43642	7	1.1	
111	1	82	9.69	729.81	978.29	43893	7	1.1	
110	1	83	9.74	739.55	968.55	44145	7	1.1	
109	1	84	9.66	749.21	958.89	44395	7	1.2	
108	1	85	9.67	758.88	949.22	44645	7	1.2	
107	1	86	9.75	768.63	939.47	44898	8	1.2	
106	1	87	9.75	778.38	929.72	45150	8	1.2	
105	1	88	9.69	788.07	920.03	45401	8	1.2	
104	1	89	9.75	797.82	910.28	45653	8	1.2	
103	1	90	9.68	807.5	900.60	45904	8	1.3	
102	1	91	9.68	817.18	890.92	46154	8	1.3	
101	1	92	9.75	826.93	881.17	46407	8	1.3	
100	1	93	9.75	836.68	871.42	46659	8	1.2	
99	1	94	9.75	846.43	861.67	46912	8	1.2	
98	1	95	9.74	856.17	851.93	47164	8	1.3	
97	1	96	9.75	865.92	842.18	47416	8	1.3	
96	1	97	9.74	875.66	832.44	47668	8	1.3	
95	1	98	9.74	885.4	822.70	47920	8	1.3	
94	1	99	9.69	895.09	813.01	48171	8	1.3	
93	1	100	9.74	904.83	803.27	48423	8	1.3	
92	1	101	9.75	914.58	793.52	48676	9	1.4	
91	1	102	9.75	924.33	783.77	48928	9	1.4	
90	1	103	9.75	934.08	774.02	49181	9	1.4	
89	1	104	9.75	943.83	764.27	49433	9	1.4	
88	1	105	9.74	953.57	754.53	49685	9	1.4	

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							Date :		21-Sep-07	
Stick up: 0.88 m		TD : 1,712.00 m		Rat hole 3.90 m		Total Joints 190				
TotalLength 1,708.98 m		Casing Ø: 3 1/2 in.		Mud weight: 1.12 SG		Joints to RIH 174				
		Shoe at: 1,708.10 m		Hook weight: 25,000 lbs		Excess Joints 16				
Type	Grade	Weight	OD	ID	Ext Vol	Steel Vol.	Torq Max	Torq Opt	Torq Min	
1	13Cr	9 lbs/ft	3.500 in.	2.992 in.	6.27 l/m	1.74 l/m	3542	3,220 ft. lbs	2898	
Joint #	Type #	Order #	Joint Length (m)	Cumul. Length (m)	Distance to RT (m)	Hook Load (Lbs)	Mud Gain		Remarks	
							bbl	m3		
87	1	106	9.75	963.32	744.78	49937	9	1.4		
86	1	107	9.67	972.99	735.11	50188	9	1.5		
85	1	108	9.75	982.74	725.36	50440	9	1.5		
84	1	109	9.75	992.49	715.61	50693	9	1.5		
83	1	110	9.75	1002.24	705.86	50945	10	1.5		
Pup joint	1	111	1.96	1004.2	703.90	50996	10	1.5		
Pup Joint	2	112	3.05	1007.25	700.85	51075	10	1.5		
X Nipple	1	113	0.38	1007.63	700.47	51085	10	1.5	Conjunto armado	
Pup Joint	2	114	3.06	1010.69	697.41	51164	10	1.5		
82	1	115	9.74	1020.43	687.67	51416	10	1.5		
81	1	116	9.74	1030.17	677.93	51668	10	1.6		
80	1	117	9.75	1039.92	668.18	51920	10	1.6		
79	1	118	9.75	1049.67	658.43	52173	10	1.6		
78	1	119	9.75	1059.42	648.68	52425	10	1.6		
77	1	120	9.74	1069.16	638.94	52677	10	1.6		
76	1	121	9.75	1078.91	629.19	52930	10	1.6		
75	1	122	9.75	1088.66	619.44	53182	10	1.7		
74	1	123	9.75	1098.41	609.69	53435	11	1.7		
73	1	124	9.74	1108.15	599.95	53687	11	1.7		
72	1	125	9.74	1117.89	590.21	53939	11	1.7		
71	1	126	9.75	1127.64	580.46	54191	11	1.7		
70	1	127	9.75	1137.39	570.71	54444	11	1.7		
69	1	128	9.74	1147.13	560.97	54696	11	1.8		
68	1	129	9.75	1156.88	551.22	54948	11	1.8		
67	1	130	9.75	1166.63	541.47	55201	11	1.8		
66	1	131	9.74	1176.37	531.73	55453	11	1.8		
65	1	132	9.75	1186.12	521.98	55705	12	1.8		
64	1	133	9.74	1195.86	512.24	55957	12	1.9		
63	1	134	9.75	1205.61	502.49	56210	12	1.9		
62	1	135	9.75	1215.36	492.74	56462	12	1.9		
61	1	136	9.74	1225.1	483	56714	12	1.9		
60	1	137	9.74	1234.84	473.26	56966	12	1.9		
59	1	138	9.75	1244.59	463.51	57219	12	1.9		
58	1	139	9.74	1254.33	453.77	57471	12	2.0		
57	1	140	9.29	1263.62	444.48	57711	12	2.0		
56	1	141	9.74	1273.36	434.74	57964	12	2.0		
55	1	142	9.68	1283.04	425.06	58214	13	2.0		
54	1	143	9.74	1292.78	415.32	58466	13	2.0		
53	1	144	9.74	1302.52	405.58	58718	13	2.0		
52	1	145	9.75	1312.27	395.83	58971	13	2.1		
51	1	146	9.73	1322	386.1	59223	13	2.1		
50	1	147	9.75	1331.75	376.35	59475	13	2.1		
49	1	148	9.74	1341.49	366.61	59727	13	2.1		
48	1	149	9.75	1351.24	356.86	59980	13	2.1		
47	1	150	9.75	1360.99	347.11	60232	13	2.1		
46	1	151	9.74	1370.73	337.37	60484	14	2.2		
45	1	152	9.68	1380.41	327.69	60735	14	2.2		
44	1	153	9.74	1390.15	317.95	60987	14	2.2		
43	1	154	9.75	1399.9	308.2	61239	14	2.2		
42	1	155	9.74	1409.64	298.46	61491	14	2.2		




Date :	21-Sep-07
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Total Joints	190
Joints to RIH	174
Excess Joints	16


TBG 3½" 9.2# L80 SEC / Torque (ft.lbs) = Min 2930 / Opt 3220 / Max 3540 x 1,5 FF Bakerlok = 4830 ft.lbs
Se quedarán afuera los caños
CROMO N°: 12 (9,63m) / 11 (9,74m) / 10 (9,75m) / 9 (9,74m) / 8 (9,74m) / 7 (9,70m) / 6 (9,71m)
5 (9,68m) / 4 (9,66m) / 3 (9,74m) / 2 (9,75m) / 1 (9,74m) / 167 (8,97m) / 166 (9,43m) / 165 (9,38) / 164 (9,38)

To use macros => Active cell in column "Joint #"
Don't insert or delete line in the two first lines

		CASING TALLY					Rig :		ODE-39
							Well :		AP-237
							Date :		13-Sep-07
Stick up:	1.19 m	TD :	604.00 m	Rat hole	4.20 m	Total Joints	46		
TotalLength	600.99 m	Casing Ø:	7 in.	Mud weight:	1.09 SG	Joints to RIH	42		
		Shoe at:	599.80 m	look 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		Remarks
							bbl	m3	
Float Shoe	1	1	0.46	0.46	599.34	20030	0	0.0	Testear
46	1	2	14.31	14.77	585.03	20960	0	0.1	C1 + Stp Rng (3 m del Zapato)
45	1	3	14.36	29.13	570.67	21894	1	0.1	C2 + Stp Rng al Centro
Float Collar	1	4	0.40	29.53	570.27	21920	1	0.1	Testear - C3 + Stp Rng (3 m Collar)
44	1	5	14.39	43.92	555.88	22855	1	0.2	C4 + Stp Rng
42	1	6	14.40	58.32	541.48	23791	2	0.3	C5 + Stp Rng
41	1	7	14.13	72.45	527.35	24710	2	0.3	C6 + Stp Rng
40	1	8	14.25	86.70	513.10	25636	2	0.4	C7 + Stp Rng
39	1	9	13.93	100.63	499.17	26541	3	0.5	C8 + Stp Rng
38	1	10	14.38	115.01	484.79	27476	3	0.5	
37	1	11	14.34	129.35	470.45	28408	4	0.6	
36	1	12	13.20	142.55	457.25	29266	4	0.6	
35	1	13	14.18	156.73	443.07	30188	4	0.7	C9 + Stp Rng
34	1	14	14.36	171.09	428.71	31122	5	0.8	
33	1	15	14.35	185.44	414.36	32054	5	0.8	
32	1	16	14.38	199.82	399.98	32989	6	0.9	
31	1	17	14.20	214.02	385.78	33912	6	1.0	C10 + Stp Rng
30	1	18	13.75	227.77	372.03	34806	6	1.0	
29	1	19	13.96	241.73	358.07	35714	7	1.1	
28	1	20	14.44	256.17	343.63	36652	7	1.2	
27	1	21	14.47	270.64	329.16	37593	8	1.2	C11 + Stp Rng
26	1	22	14.46	285.10	314.70	38533	8	1.3	
25	1	23	14.35	299.45	300.35	39466	9	1.4	
24	1	24	11.43	310.88	288.92	40209	9	1.4	
23	1	25	14.45	325.33	274.47	41148	9	1.5	C12 + Stp Rng
22	1	26	14.44	339.77	260.03	42087	10	1.5	
21	1	27	14.33	354.10	245.70	43018	10	1.6	
20	1	28	14.05	368.15	231.65	43932	10	1.7	
19	1	29	14.32	382.47	217.33	44862	11	1.7	C13 + Stp Rng
18	1	30	14.24	396.71	203.09	45788	11	1.8	
17	1	31	13.84	410.55	189.25	46688	12	1.9	
16	1	32	13.60	424.15	175.65	47572	12	1.9	
15	1	33	13.82	437.97	161.83	48470	12	2.0	C14 + Stp Rng
14	1	34	14.16	452.13	147.67	49391	13	2.0	
13	1	35	14.45	466.58	133.22	50330	13	2.1	
12	1	36	14.34	480.92	118.88	51262	14	2.2	
11	1	37	14.37	495.29	104.51	52196	14	2.2	C15 + Stp Rng
10	1	38	14.25	509.54	90.26	53123	15	2.3	
9	1	39	14.45	523.99	75.81	54062	15	2.4	
8	1	40	13.81	537.80	62.00	54960	15	2.4	
7	1	41	13.83	551.63	48.17	55859	16	2.5	C16 + Stp Rng
6	1	42	13.56	565.19	34.61	56740	16	2.6	
5	1	43	14.19	579.38	20.42	57662	17	2.6	
4	1	44	13.64	593.02	6.78	58549	17	2.7	
WHDn	1	45	0.17	593.19	6.61	58560	17	2.7	Hang off point=6,58 m
WHUp	1		0.46	593.65	6.15	58590	17	2.7	Tomar Pesos
L-Joint+RTool	1	46	7.34	600.99	-1.19	59067	17	2.7	

	<p style="text-align: center;"><u>END OF ACTIVITY REPORT</u></p> <p style="text-align: center;">AGUADA PICHANA FIELD - Development Onshore Argentina</p>	<p><u>Well</u> : AP-237</p> <p><u>Rig</u> : ODE-39</p> <p><u>Start date</u> : 08/09/2007</p> <p><u>End date</u> : 22/09/2007</p>
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8) **CEMENTING REPORT**

<div></div> <div>TOTAL AUSTRAL</div>				CEMENTING 3 1/2" tbg				Report N° 2		DATE: 22-Sep-07		AP-237														
Casing to be Cemented 3.5 inch				Cement Job type										Surface casing												
Casing shoe	1708	mMD	1708	mVD	Mud type	WBM	SG	1.12	BHST	79	°C															
Drilling Size	6 1/8	inch			LOT / FIT	-	EMW	mVD	BHCT	46	°C															
TD	1712	mMD	1712	mVD	Pore press.	-	EMW	at	API schedule	-																
Prev casing	7	inch	23	lbs/ft	Format. frac	-	EMW	at	-Pressure		bars															
Prev csg shoe	600	mMD	600	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 :	50 BC		3:05 hs														
Halad - 477			kg				20		Thickening Time:	70BC	+ 4:00 hs	3:15 hs														
DAIR 3000L			l				2	2	Thickening Time:	100BC		3:22 hs														
CFR-3L			l				4	20	Free Water % :	vertical																
Microblock			l					70	Free Water % :	45°																
HR-6L			l					1	Fluid loss ml	1000 psi	@ 45 °C	120	20													
Tuned Light			l				700		Yield	m3 slurry/ton cmt		2.65	0.804													
Tuned Spacer			l	1000					Compress Strength @ 65 C																	
SSA 1			kg	375								50 psi	7:23 hs	4:10 hs												
Halad - 567L			l					20				500 psi	19:12 hs	5:24 hs												
SEM-7			lt	10	10							2654 psi		24:12 hs												
Fe 2			kg	7	32							607 psi	24:06 hs													
Mud Flush			lt		1000																					
Super Flush 101			l			1000																				
Cloruro Calcio			kg			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		1.25																								
Spacer2		1.02																								
Lead	75 F	1.15	132	95	53	43	32	24					118.5	13.5	0.84	0.53										
Tail	75 F	1.90	162	116	73	39	24	17					133.5	28.5	0.67	1.92										
Mud		1.12											14	11												
Thin Mud																										
Spacer1		1.20																								
Spacer2		1.02																								
Lead		1.15													#DIV/0!	#DIV/0!										
Tail		1.90													#DIV/0!	#DIV/0!										
Products used and cost										Operation summary																
Products	Unit	SPACERS		SLURRIES			Unit price	Cost	Operation break down		Volume m3	Flow L/mn	Press bars	Time mn												
		n°1	n°2	n°3	Lead	Tail			Circulation																	
Cement G	MT				5.75	4.00	390.00	1560.00	Batch mixing		18.4	1050	83													
Fresh water	m3	6.96	8.64	2.4	7.60	1.306										60										
Tuned Light	m3				15.90		2500.00	39750.00	Test Lines				338	10												
Halad-447	kg				125		25.00	3125.00	Spacers		21.5	800	48	28												
CFR-3L	lt				69	237	10.00	3060.00	Lead cement		15.26	800	76	17												
D-Air 3000L	lt	8			12	18	22.00	836.00	Tail cement		3.18	800	70	5												
Microblock	lt					250	10.00	2500.00	Displacement		7.68	800	77	15												
Halad-567 LXP	lt					79	45.00	3555.00																		
HR-6L	lt					4	16.00	64.00																		
Tuned Spacer	lt	8000					1.52	12160.00																		
Silice	kg	2300					1.00	2300.00																		
Sem 7	lt	88	86	16			20.00	3800.00																		
Fe 2	kg		275				7.00	1925.00																		
KCl	kg			50			1.50	75.00	Total displac.				7.60													
Super Flush 101	lt			2400			1.20	2880.00	Pressure test				207													
Cloruro Calcio	kg			100			2.00	200.00	Slurries volumes excess (%)																	
Mud Flush	lt		8,800				0.18	1584.00			Caliper	OR/AND	Excess													
Sub-Total Servicios								11127.00	Lead		6.20		10%													
Sub-Total Servicios Adicionales								280.00	Tail		6.19		10%													
Total cost		16396.0	5229.0	3475.0	46071.5	10445.0		\$ 52,540.14																		
Material used on site	Displacement	Halliburton HT 400, 20 bbls displacement tanks.							Results		Plan.	Actual														
	Pits	Halliburton Tanks							Top Lead		449.70		mMD													
	Van for data acquisition								Top Tail		1508.10		mMD													
									Internal top (FC)				mMD													
Comments	Normal Drilling.																									
	Run 30 bow centralizers 3.5"																									
	Test Lines. Pump 50 bbl of Tuned Spacer. Drop Calibrator Plug. Pump 48.3 bbl of Mud Flush. W/2900 psi. rupture fusible disk alone.																									
	Pumping 6 bbl Mud Flush + 30 bbl Superflush 101. Drop bottom plug.																									
	Pump 100 bbl of 1.15 SG Lead Slurry and 24 bbl of 1.9 SG tail slurry. Drop top plug.																									
	Displace with 48.3 Bbl of water. Final pressure: 1120 psi, bump plug: OK. Test w/ 3000 psi. Flow back: 0.5 bbl. Floats OK.																									
Good return during job.										Rig		ODE 39														
Invoicing Halliburton USD 52,540.14 * total c/discounts and split										Cement Contract		Halliburton														

PARTE DE OPERACIONES DE CEMENTACION Y BOMBEO

DISTRITO:	NEUQUEN	CMPTO:	NEUQUEN	FECHA:	22-Sep-07
YACIMIENTO:	AGUADA PICHANA	POZO:	AP-237	PROV.:	NEUQUEN
CLIENTE:	TOTAL AUSTRAL	EQUIPO DE:	ODE 39	DISTANCIA:	140 Km
SOLICITADO POR:	Jean Leminous	RECIBIDO POR:	S. Alvarez	HORA DE LLAMADA:	09:30 hs - 20 Septiembre
HORA DE LLEGADA:	20:30 hs - 21 Septiembre	INICIO:	10:00 hs - 22 septiembre	TERMINO:	14:00 hs
OPERATION TIME:	4:00 hs	LOST TIME:		STAND BY:	

Datos del Pozo:		Datos de la Tubería			
Prof. Final:	1712 mts	Tope:	450 mts	Diámetro y Tipo:	3 1/2
Diámetro Promedio:	6.19	Den. Lodo:	1.12 SG	Prof. del Zapato:	1708.10 mts
Reología Lodo:	14 VP	PF:	11	Prof. del Collar:	1687.41 mts
Tipo de Lodo:	Polynox	Geles:	3 / 5 / 8	Prof. Aro de Tope:	-
Prof. de Barras:	-	Punzados:	-	Prof. Hta	-
				Peso Casing:	9.20
				Profundidad DV:	-
				Tipo Liner:	-
				Diámetro Liner:	-
				Profundidad Liner:	-

Tipo de Operación:		CEMENTACION TUBING PRODUCCION 3 1/2"			
Presiones:	Inicial:	700 psi	psi	Final:	1120 psi
Caudales:	Tratamiento:	6.6	Bb/min	Desplazamiento:	6 - 4 - 2
					Bb/min

Descripción del bombeo:		Volúmenes	Densidades
Spacer 1	Tuned Spacer	50.0 Bbl	1.20 SG
Spacer 2	Mud Flush	55.0 Bbl	1.02 SG
Spacer 3	Agua + ClCa2	5.0 Bbl	1.08 SG
Spacer 4	Agua + KCl	5.0 Bbl	1.01 SG
Spacer 5	Super Flush 101	15.0 Bbl	1.20 SG
Spacer 6	Agua + KCl	5.0 Bbl	1.10 SG
Lead Slurry	Cemento "G" + 2.00% Halad-447 + 75.00% Tuned Light + 0.10 l/bol D-Air 3000L + 0.60 l/bol CFR-3L	100.0 Bbl	1.15 SG
Tail Slurry	Cemento "G" + 1.0 L/bol Halad 567L + 2 l/bol CFR 3L + 3.5 L/bol Microblock + 0.10 l/bol D Air 3000L + 0.05 l/bol HR-6L	24.0 Bbl	1.90 SG
Displacement	Salmuera Filtrada	48.3 Bbl	1.00 SG

Materiales:				Elementos de Entubacion:			Equipos:		
TIPO	CANTIDAD	UNIDADES	HES	CLIENTE	TIPO	CANT.	TIPO		OPERADOR
CEMENTO "G"	80	bolsas	x				447-451	ADC	E. Chauquel
Tuned Light	15.9	m³	x				326-449	MIXER	M. Abraham
Halad-447	125.0	Kg	x				436-77086	MIXER	J. Marrero
CFR-3L	306.0	Litros	x				Cont - BM 86	BULK	M. Diaz
D-Air 3000L	38.0	Litros	x				435-BM88	BULK	J. Espinoza
Microblock	250.0	Litros	x				346-FR123	CISTERNA	A. Contreras
Halad-567 LXP	79.0	Litros	x				325-TR106	CISTERNA	E. Montero
HR-6L	4.0	Litros	x				AV1832	COMPUVAN	M. Colantonio
Tuned Spacer	8000.0	Litros	x						
Silice	2300.0	Kg	x						
Sem 7	190.0	Litros	x				Contr	PICK UP	G. Paez
Fe 2	275.0	Kg	x				Av 1965	PICK UP	S. Alvarez
KCl	50.0	Kg	x						
Super Flush 101	2400.0	Litros	x						
Cloruro Calcio	100.0	Kg	x						
Mud Flush	8800.0	Litros	x						

Registro de la Operación:		CAUDAL	PRESIONES	OBSERVACIONES
TIEMPO	DETALLE	BPM	Csg (PSI)	
20:30hs-21 sept	Llega a locacion y espera orden para ingresar			Almacena Agua Filtrada en Cistern
22:00 hs	Arma equipos y prepara colchones + agua de mezcla.			
08:00hs- 22 sept	Finaliza de entubar. Conecta cabeza de circulacion. Circula compañía ODE.	6.6 bpm	1200 psi	Circula normal
09:30 hs	Realiza reunion de seguridad y trabajo. Prueba lineas con 4900 psi OK.		4900 psi	
10:10 hs	Comienza a mezclar lechadas en Batch Mixer. Continúa circulando pozo.	7 bpm	1200 psi	
11:40 hs	Bombea 50 bbl de Tuned Spacer. Lanza Tpn Calibrador y monta Cabeza Cementación	5 bpm	700 psi	
11:58 hs	Bombea 48.3 bbl Mud Flush. Llega Tpn Calib. a Collar. Presuriza c/ 2900 psi. Test (-)	6 bpm	700 psi	Tapon rompe solo.
12:08 hs	Bombeo resto de Mud Flush + Superflush 101.	5 bpm	1800 psi	Tpn rompe parcial. Elevada presión de bombeo. Baja al llegar
12:17 hs	Lanza Tpn Inferior y bombea 100 bbl de Lech Relleno 1.15 SG+24 bbl de Lech Ppal 1.9 SG.	6 bpm	1000 psi	Tpn inferior.
12:40 hs	Lava Lineas c/ Agua Dulce y Salmuera. Lanza Tapon Superior .			
12:44 hs	Desplaza con 48.3 bbl de Agua Filtrada.	6 - 4 - 2 bpm	1120 psi	Ecualiza a 18 bbl de desplaz
12:58 hs	Tope tapon (ok). Presuriza a 3000 psi. Registra 10 min OK.			
13:08 hs	Descarga presión. Collar Cierra (ok). Retorna 0.5 bbl.			
14:00 hs	Finaliza operacion. Desmonta equipos y lineas. Retira de locación.			

DATOS ADICIONALES SOBRE LA OPERACION:

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

3.5 hs
10 min
no
Despues
normal
si

Caudal y presión de Circulación:
Cantidad de centralizadores y tipo:
Hizo tope tapon?:
Accionó el collar de Retención?:
Circuló durante el trabajo?:
Tiempo total de mezclado:
Tiempo de desplazamiento:

1050 lt/min	1200 psi
30	bow
si	
si	
si	
70 min	
15 min	

COMENTARIOS: Tapon calibrador rompe antes, no pudiendo testear el TBG. Se testea con el tope del tapon superior.
Pozo con perdidas parciales de circulacion (0.5 - 1 m³/hs) durante la perforacion y perfil.

POR EL CLIENTE:

Jean Leminous
Carlos Contreras

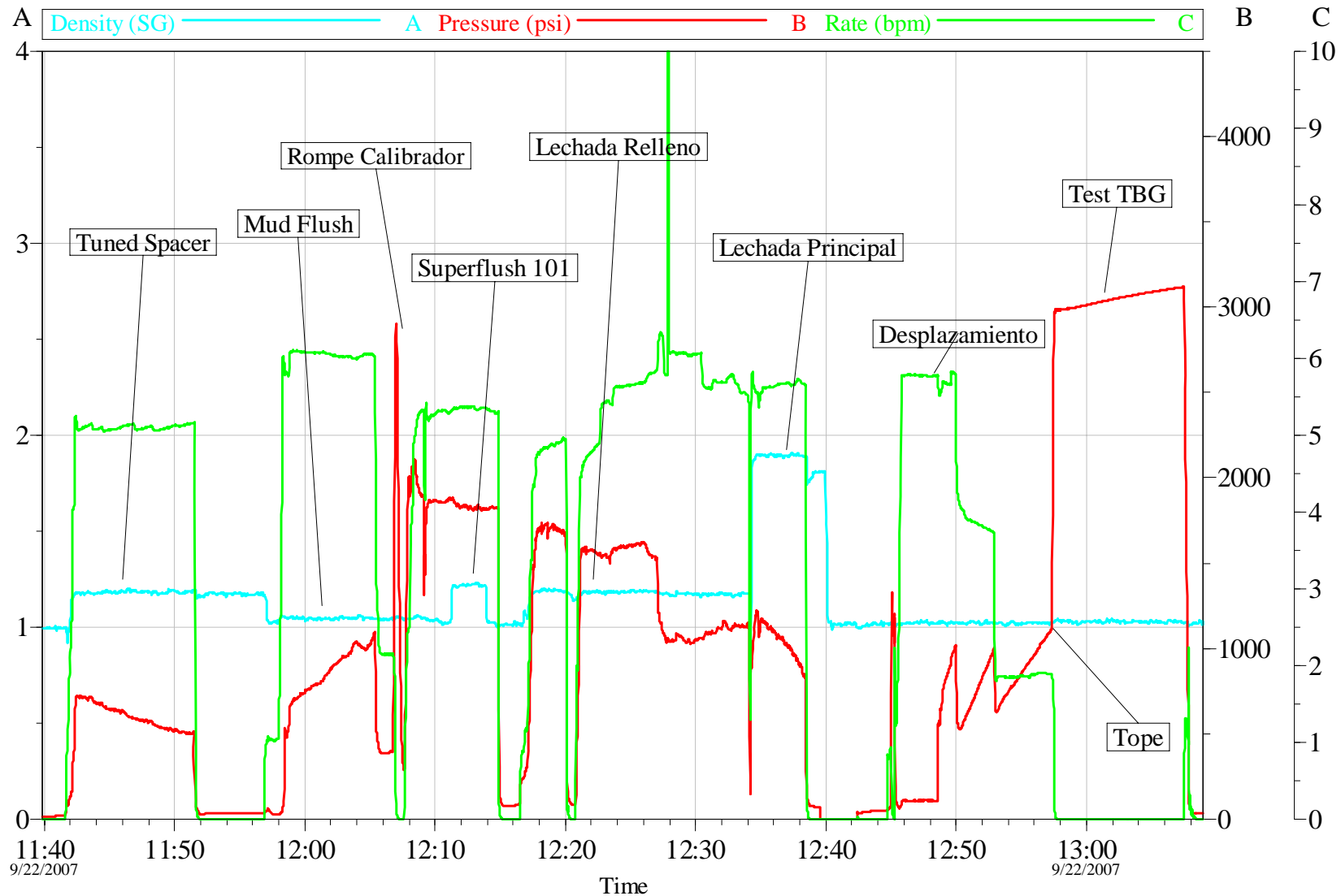
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POR HALLIBURTON ARGENTINA :

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

Gustavo Paez
Sergio Alvarez

AP 237 - Aislacion TBG 3.5"



Customer: TOTAL AUSTRAL SA	Job Date: 22-Sep-2007	Sales Order #: 5374622
Well Description: AP 237 - Aislacion 3.5"	TOTAL Rep: J. Leminous - C. Contreras	HASA Rep: G. Paez - S. Alvarez

HALLIBURTON
OptiCem v6.1.3
22-Sep-07 13:15

<div><div></div><div>TOTAL</div></div> <div>TOTAL AUSTRAL</div>				CEMENTING7" csg				Report N° 1		DATE: 17-09-07				AP-237			
Casing to be Cemented7inch				Cement Job typeSurface casing													
Casing shoe599.70mMD599.70mVD				Mud typeWBM				SG1.08				BHSTnot record °C					
Drilling Size8 3/4inch				LOT / FIT-				atmVD				BHCTnot record °C					
TD604.0mMD608mVD				Pore press.-				atmVD				API schedule-					
Prev casinginchlbs/ft				Format. frac-				atmVD				-Pressure70bars					
Prev csg shoemMDmVD																	
Laboratory fluids design																	
Products, additives, water			Unit	SPACERS		SLURRIES			Characteristics				SLURRIES				
				n°1	n°2	n°1	n°2						n°1	n°2			
Cement G			MT			4.25	6.85				Specific gravity		SG	1.50	1.90		
Fresh water			l	4767.00		4,599	3,054				Thickening Time :		50 BC	+5:00	4:57 hs		
Halad - 447			kg				30				Thickening Time:		70 BC		5:41 hs		
Bentonita Prehidratada			kg			125					Thickening Time:		100 BC		6:19 hs		
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	144		
											Yield		m3 slurry/ton cmt	1.4256	0.7668		
											Compress Strength @ 46 C		50 psi	10:50 hs	3:09 hs		
													500 psi		5:00 hs		
													2773 psi	-	24:07 hs		
													233 psi	24:22 hs			
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	53	45	34	29	21	16					28.5	24.5	0.40	3.86
Tail		24	1.90	74	53	40	36	29	18					51	23	0.41	4.50
Mud		50	1.08											13	17		
Thin Mud																	
Spacer1																	
Spacer2																	
Lead																	
Tail																	
Products used and cost											Operation summary						
Products		Unit	SPACERS		SLURRIES			Unit price	Cost	Operation break down		Volume m3	Flow L/mn	Press bars	Time mn		
			n°1	n°2	Lead	Tail	Top job										
Cement G		MT			4.25	6.85		390.00	4329.00	Circulation			1203	29.38	2:00 hs		
Fresh water		m³	4.8		4.6	3.1				Batch mixing		11.28					
Bentonita		kg					0.50	0.00		Test Lines				336			
Cloruro de Calcio		kg			100		2.00	200.00		Spacers		4.77	953	22			
D-Air 3000L		lt			19		22.00	418.00		Lead cement		6.04	953	21			
Halad - 447		kg			30		25.00	750.00		Tail cement		5.24	953	23			
										Displacement		12.04	12037	79			

PARTE DE OPERACIONES DE CEMENTACION Y BOMBEO

DISTRITO:	NEUQUEN	CMPTO:	NEUQUEN	FECHA:	15-Sep-2007
YACIMIENTO:	AGUADA PICHANA	POZO:	AP-237	PROV.:	NEUQUEN
CLIENTE:	TOTAL	EQUIPO DE:	ODE 39	DISTANCIA:	140 Km
SOLICITADO POR:	Jean Le minous	RECIBIDO POR:	Sergio Alvarez	HORA DE LLAMADA:	09:00 hs - 14 Sept
HORA DE LLEGADA:	20:15	INICIO:		TERMINO:	
OPERATION TIME:		LOST TIME:		STAND BY:	

Datos del Pozo:			Datos de la Tubería		
Prof. Final:	604.00	Tope:	Superficie	Diámetro y Tipo:	7" N-80
Diámetro Promedio:	8 3/4	Den. Lodo:	1.08 SG	Prof. del Zapato:	599.70 mts
Reología Lodo:	13	VP PF	17	Prof. del Collar:	570.17 mts
Tipo de Lodo:	POLYNOX	Tubing:	-	Prof. Aro de Tope:	-
Prof. de Barras:		Punzados:	-	Prof. Hta	-
				Peso Casing:	23.00
				Profundidad DV:	-
				Tipo Liner:	-
				Diámetro Liner:	-
				Profundidad Liner:	-

Tipo de Operación		CEMENTACION CANERIA SUPERFICIE 7'				
Presiones:	Inicial:	320 psi	Final:	1125 psi	Tope tapón:	2940 psi
Caudales:	Tratamiento:	1203 lts/min			Desplazamiento:	7-6-5-2 Bb/min

Descripción 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	38.0 bbl	1.50 SG
Tail Slurry	Cemento "G" + 0.40% Halad 447 + 0.10 l/bol D-Air 3000L	33.0 bbl	1.90 SG
Displacement	Agua	75.8 bbl	1.00 SG

Materiales:					Elementos de Entubacion:		Equipos:		
TIPO	CANTIDAD	UNIDADES	HES	CLIENTE	TIPO	CANT.	TIPO		OPERADOR
CEMENTO "G"	222	bolsas	x				ADC	447-451	E. Cheuquel
Cloruro de Calcio	100	kg	x				MIXER	436-CM449	J. Marrero
D-Air 3000L	19	lts	x				BULK	359-BM86	J. Espinoza
Bentonita Prehidratada	150	kg		x			COMPUVAN	1832	Montero
Halad - 447	30	kg	X						N. Garrido
							PICK UP	AV 1964	R. Villalva
							PICK UP	AV 1952	J. Ogando

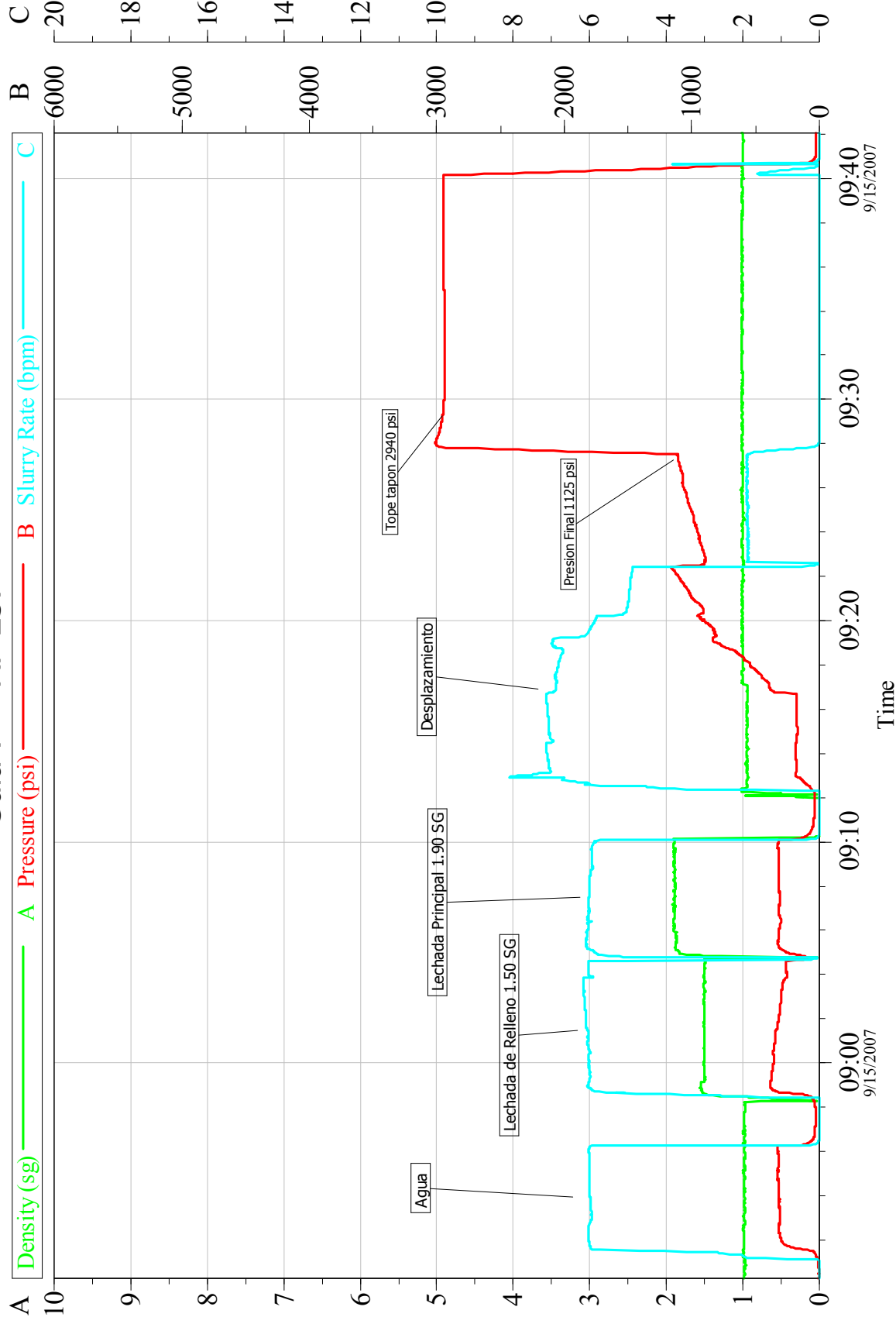
Registro de la Operación:		CAUDAL BPM	PRESIONES Csg (PSI)	OBSERVACIONES
TIEMPO	DETALLE			
20:15	Llega a locacion			
22:00	Arma equipos y líneas. Prepara agua de mezcla			
5:50 AM - 15/09/07	Finaliza entubación. Monta cabeza, conecta linea de lodo. Cía ODE circula pozo.	8 bpm	420 psi	Circula normal
7:15	Realiza reunion de seguridad y trabajo. Prueba lineas con 4800 psi por 10 min (OK)		4800 psi	
7:40	Comienza a mezclar lechadas. Continúa circulando			
	Bombea 30 bbl de agua	6 bpm	320 psi	
8:58	Lanza Tapon Inferior + bombea 38 bbl lechada 1.5 s.g	6 bpm	300 psi	
	Bombea 33 bbl lechada principal 1.9 s.g.	6 bpm	325 psi	
9:12	Lanza tapon sup. Desplaza con 75.75 bbl de agua.	7-6-5-2	1125 psi	Retorna cemento desde los 62 bbl
9:28	Tope tapon incrementa presion a 2940 psi. Chequea csg 10 min OK			de desplazamiento.
9:40	Se desfoga y retorna 0.75 bbl Cierran elementos de flotacion of			Ecualiza a los 32 bbl de desplaz.
10:00	Finaliza operacion. Desmonta líneas y equipos.			

DATOS ADICIONALES SOBRE LA OPERACION:

Tiempo de circulación antes de Cementar:	2:00 hs	Caudal y presión de Circulación:	8	420 psi
Tiempo sin circular previo a Cementar	-	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:	1 hr.	
		Tiempo de desplazamiento:	16 min.	

COMENTARIOS:

Guia 7" - AP 237



HALLIBURTON
OptiCem v6.1.3
15-Sep-07 09:53

Customer:	TOTAL	Job Date: 15-Sep-2007	TOTAL:	J.Leminous/C. Contreras
Well Description:	AP 237	UWI:	HALLIBURTON:	R. Villalva/J. Ogando



END OF ACTIVITY REPORT

AGUADA PICHANA FIELD - Development
Onshore Argentina

Well : **AP-237**

Rig : **ODE-39**

Start date : **08/09/2007**

End date : **22/09/2007**

9) SAFETY

**TOTAL Austral****Rig Safety Summary****Well Name: AP-237**

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 9/8/2007 End Date : 9/23/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,166,149 Final Depth : 5,616.8
---	-----------------------------	--	--	--

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	ENSIGN	22.01	9/8/2007	

Safety Incidents**Incident**

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

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
9/11/2007 00:00	Others	4	SPUsa
9/11/2007 00:00	Others	1	BACS
9/13/2007 00:00	Total	2	
9/14/2007 00:00	Others	1	
9/14/2007 00:00	Total	1	
9/15/2007 00:00	Total	1	
9/17/2007 00:00	Halliburton	6	
9/18/2007 00:00	Contractor	7	
9/18/2007 00:00	Geoservices	4	
9/21/2007 00:00	Geoservices	5	
9/21/2007 00:00	Others	1	
9/21/2007 00:00	Schlumberger	1	
9/21/2007 00:00	Total	3	
9/22/2007 00:00	Halliburton	2	

BOP Tests, Safety Drills and Meetings

Date	Type	Comment
9/13/2007 05:00	Pre Spud Meeting	
9/14/2007 23:15	Pre-Job Meeting	7 " csg
9/15/2007 07:15	Pre-Job Meeting	7" cement job
9/15/2007 11:00	Pre-Job Meeting	BOP's
9/15/2007 23:45	BOP's Test	
9/16/2007 15:30	Kick Drill	
9/20/2007 15:30	Pre-Job Meeting	WL logging.
9/21/2007 14:30	Pre-Job Meeting	csg running
9/21/2007 20:00	Pre-Job Meeting	csg running
9/22/2007 09:30	Pre-Job Meeting	Cement job
9/22/2007 18:00	Pre-Job Meeting	N/D Bop's

	<p style="text-align: center;"><u>END OF ACTIVITY REPORT</u></p> <p style="text-align: center;">AGUADA PICHANA FIELD - Development Onshore Argentina</p>	<p><u>Well</u> : AP-237</p> <p><u>Rig</u> : ODE-39</p> <p><u>Start date</u> : 08/09/2007</p> <p><u>End date</u> : 22/09/2007</p>
---	--	--

10) **DAILY DRILLING REPORT**



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

BOP Test

Type	Last Date	Next Date
BOP's Test		

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	Branch
				AP-237

WellBore

Expected TD
5,594

Daily Summary :
Rig move from AP 236 to AP 237 (10 Km)

6:00 am Status :
Wait on day light.

Planned Operation :
Rig move from AP 236 to AP 237.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
05:00	15.00	Rig move from AP 236 to AP 237.	ASSY	15.00
		Rig down 20% - Rig move 10% - Rig up 0%.		
20:00	4.00	Wait on day light.	DAY	19.00

Days w/o LTA : 220

Stop Cards

Parent Company	Quantity

Safety Incidents

Date	Type

MOVING, MOVING

Daily progress
Drilling Hours
Midnight depth

Date
Report number
Water Depth
Activity Type & N°

9/8/2007
1
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Next : 7" at 600m.

Remarks

from 00h00 to 06h00 : Wait on day light.

Rig move equipment :

1 Forklift.
1 Crane 20T
4 semi.
4 low bed.
2 gin pole

Mud

Mud Type	Density (...)	ECD (lb/...	Mud Vol ...
OW R...	Solids...	Sand	LGS (%) HGS (%)
PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
Filtrate (mL/30...	HTHP Filt (mL/3...		Oil Cuttl...
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 : 245,414
Cumulative Cost : 245,414

Mud Costs

Cost (Loc)
0
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

Supervisor
Alex Baudry

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	Type	Count
		Drig Contractor	26
		Operator - D&C	4
		Service Cies	4
		Cumul POB :34	

POB



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

BOP Test

Type	Last Date	Next Date
BOP's Test		

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	Branch
				AP-237

WellBore

Expected TD
5,594

Daily Summary :
Rig move from AP 236 to AP 237 (10 Km)

6:00 am Status :
Wait on day light.

Planned Operation :
Rig move from AP 236 to AP 237.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	8.00	Wait on day light.	DAY	8.00
08:00	12.00	Rig move from AP 236 to AP 237. Rig down 70% - Rig move 50% - Rig up 30%.	ASSY	20.00
20:00	4.00	Wait on day light.	DAY	24.00

Days w/o LTA : 221

Stop Cards

Parent Company	Quantity

Safety Incidents

Date	Type

Remarks

from 00h00 to 06h00 : Wait on day light.

Mast lowered at 11:00.

Rig move equipment :

1 Forklift.
1 Crane 20T
4 semi.
4 low bed.
2 gin pole

Cost
(USD)

Daily Cost : 3,050
Cumulative Cost : 248,464

Mud Costs

Cost (Loc)
0
Cum Field (Loc)

MOVING, MOVING

Daily progress
Drilling Hours
Midnight depth

Date
Report number
Water Depth
Activity Type & N°

9/9/2007
2
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" at 600m.

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Mud

Mud Type	Density (...)		ECD (lb/...	Mud Vol ...
OW R...	Solids...	Sand	LGS (%)	HGS (%)
PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...	
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

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)

Drill String Runs

BHA No.	BHA

Date

Type

Supervisor
Alex Baudry

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	Type	Count
		Drig Contractor	26
		Operator - D&C	4
		Service Cies	4
Cumul POB :34			

POB



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

BOP Test

Type	Last Date	Next Date
BOP's Test		

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	Branch
				AP-237

WellBore

Expected TD
5,594

Daily Summary :
Rig move from AP 236 to AP 237.

6:00 am Status :
Wait on day light.

Planned Operation :
Rig move from AP 236 to AP 237.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	8.00	Wait on day light.	DAY	8.00
08:00	12.00	Rig move from AP 236 to AP 237. Rig down 100% - Rig move 100% - Rig up 60%.	ASSY	20.00
20:00	4.00	Wait on day light.	DAY	24.00

Days w/o LTA : 222

Stop Cards

Parent Company	Quantity

Safety Incidents

Date	Type

Remarks

from 00h00 to 06h00 : Wait on day light.

Rig move equipment :

1 Forklift.
1 Crane 20T
8 semi.
4 low bed.
2 gin pole

Cost
(USD)

Daily Cost : 3,050
Cumulative Cost : 251,514

Mud Costs

Cost (Loc)
0
Cum Field (Loc)

MOVING, MOVING

Daily progress
Drilling Hours
Midnight depth

Date
Report number
Water Depth
Activity Type & N°

9/10/2007
3
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" at 600m.

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Mud

Mud Type	Density (...)	ECD (lb/...	Mud Vol ...
OW R...	Solids...	Sand	LGS (%) HGS (%)
PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
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

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

Supervisor
Alex Baudry

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
Drig Contractor	26
Operator - D&C	4
Service Cies	4
Cumul POB :34	



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

BOP Test

Type	Last Date	Next Date
BOP's Test		

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	Branch
				AP-237

WellBore

Expected TD
5,594

Daily Summary :
Rig up on location. Raise mast and condition rig.

6:00 am Status :
Condition rig.

Planned Operation :
Complete to condition rig - Spud the well.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	8.00	Wait on day light.	DAY	8.00
08:00	10.50	Rig move from AP-236 completed. Continue with Rig up.	ASSY	18.50
18:30	5.50	Condition the rig and prepare to spud.	ASSY	24.00

Well Name: AP-237

Days w/o LTA : 223

Stop Cards

Parent Company	Quantity
Others	4
Others	1

Safety Incidents

Date	Type

Remarks

From 00h00 to 06h00 :

00h00 to 06h00 : Condition rig.

Mast raised at 18h30.

Drawworks raised at 19h15.

Cost
(USD)

Daily Cost : 3,050
Cumulative Cost : 254,564

Mud Costs

Cost (Loc)
0
Cum Field (Loc)

MOVING, MOVING

Daily progress
Drilling Hours
Midnight depth

Date
Report number
Water Depth
Activity Type & N°

9/11/2007
4
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" at 600m.

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Mud

Mud Type		Density (...)		ECD (lb/...		Mud Vol ...			
OW R...		Solids...		Sand		LGS (%)		HGS (%)	
PV OR (cp)			YP OR (l...			YS Calc (...)		Marsh vl...	
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

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)

Drill String Runs

BHA No.	BHA

Date

Type

Supervisor
Alex Baudry

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

Bit Dull

Bit Dull

POB

Type	Count
Drig Contractor	26
Operator - D&C	3
Service Cies	4
Cumul POB :33	



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

BOP Test

Type	Last Date	Next Date
BOP's Test		

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	Branch
				AP-237

WellBore

Expected TD
5,594

Daily Summary :
Condition rig prior to spud AP-237.

6:00 am Status :
Condition rig.

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

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	24.00	Condition rig prior to spud the well in progress.....R1.	ASSY	24.00

Days w/o LTA : 224

Stop Cards

Parent Company	Quantity

Safety Incidents

Date	Type

MOVING, MOVING

Daily progress
Drilling Hours
Midnight depth

Date
Report number
Water Depth
Activity Type & N°

9/12/2007
5
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Next : 7" at 600m.

Remarks

From 00h00 to 06h00 :

00h00 to 06h00 - Drill auxiliary wells. Pressure test 4" & 2" lines to 4000psi.
Spud the well at 06h00.

R1:

- Test emergency shut down
- Mix 42 m3 spud mud.
- Weld conductor pipe.
- test fire fighting equipments.
- M/U kelly.

Cost
(USD)

Daily Cost : 5,050
Cumulative Cost : 259,614

Mud Costs

Cost (Loc)
0
Cum Field (Loc)

Mud

Mud Type	Density (...)	ECD (lb/...	Mud Vol ...
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OW R...	Solids...	Sand	LGS (%)	HGS (%)
---------	-----------	------	---------	---------

PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
------------	-------------	---------------	-------------

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
Baryte	kg	0.0	16.0
Drilling Water	m³	0.0	136.0
Diesel	L	1,800.0	7,720.0

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)

Drill String Runs

BHA No.	BHA

Date

Type

Supervisor
JC LEMINOUS

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
Drig Contractor	27
Operator - D&C	3
Service Cies	9
Cumul POB :39	



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

BOP Test

Type	Last Date	Next Date
BOP's Test		

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)
308.40	308.38	1.00	
816.93	816.87	0.50	

WellBore

Branch
AP-237

Expected TD
5,594

Daily Summary :
Complete pre-spud tests. Spud the well & drill formation to 310m. Control inclinaison with teledrift.

6:00 am Status :
Drilling @548m.

Planned Operation :
Drill to 604m. Perform wiper trip to surface. RIH 7"csg.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	5.50	Drill auxiliary wells. Pressure test stand pipe lines to 4000psi : ok.	ASSY	5.50
05:30	0.50	Pre spud meeting.	HSE	6.00
06:00	2.75	Drill from surface to 44m.	DRL	8.75
08:45	1.00	Test C-O-M. Incorporate stab.	RIGMTN	9.75
09:45	4.00	Repair travelling block.....R1.	NRHAN	13.75
13:45	2.75	Resume drilling from 44m to 90m.	DRL	16.50
16:30	0.50	Perform mud conversion from spud mud to Polynox system.	CIRC1	17.00
17:00	6.50	Drill from 90m to 310m.	DRL	23.50
23:30	0.50	Cumulative Teledrift survey time	DEVI	24.00

Days w/o LTA : 225

Stop Cards

Parent Company	Quantity
Total	2

Safety Incidents

Date	Type

Remarks

From 00h00 to 06h00 :

00h00 to 02h15 - Drill from 310m to 405m.
02h15 to 02h30 - Take Teledrift survey : 0.5deg @ 400m.
02h30 to 05h45 - Drill from 405m to 548m.
05h45 to 06h00 - Take Teledrift survey : 0.5deg @ 543m.

R1:
change out bolts lateral protection carter.

**Cost
(USD)**

Daily Cost : 51,171
Cumulative Cost : 310,785

Mud Costs

Cost (Loc)
14,721
Cum Field (Loc)
14,721

8"3/4, DRILLING

Daily progress	1,017.06
Drilling Hours	12.00
Midnight depth	1,017.1

Date
Report number
Water Depth
Activity Type & N°

9/13/2007
6
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" at 600m.

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Mud

Mud Type	Density (...)	ECD (lb/...	Mud Vol ...
Lime mud	8.85	9.18	
OW R...	Solids...	Sand	LGS (%)
	4.1	0.1	6.3
PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
18.0	12.0	2.0	55.00
Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...	
6.0			
Mf (mL)	Pf (mL)	Pm (mL)	pH
2.60	1.80	12.00	12.5
Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	6	200	1,800

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
647.2	66.7	580.5

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	16.0
Drilling Water	m³	16.0	120.0
Diesel	L	2,640.0	21,080.0

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, HC-605-Z, 7114868	Drill Formation	0.0	1,017.06	12.00	84.8	1,017.06	12.00	17.6	2,175.6	528	150			68.3	63.9	66.1

Drill String Runs

BHA No.	BHA
1	HC-605-Z, Bit Sub w/ Float Valve, 6-1/2" Teledrift (1890), 1 x 6-1/2" Drill collar, 8-1/8" Stabilizer (#423), 8 x 6-1/2" Drill collar, XO, 8 x 4-3/4" Drill collar, 4-3/4" Hydraulic Jar (#1400-1375), 3 x 4-3/4" Drill collar, 12 x 3-1/2" HWD

Date	Type
9/13/2007	Pre Spud Meeting
Supervisor	
JC LEMINOUS	

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 VesselsH...

Vessel Name	Type

Bit Dull

Bit Dull

POB

Type	Count
Drig Contractor	23
Operator - D&C	5
Service Cies	9
Cumul POB :37	



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

BOP Test

Type	Last Date	Next Date
BOP's Test		

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)
1,312.34	1,312.26	0.50	
1,781.50	1,781.40	0.50	
1,970.14	1,970.02	1.50	
1,971.78	1,971.66	0.50	

WellBore

Branch
AP-237
Expected TD 5,594

Daily Summary :
Drill from 310m to 604m. Perform wiper trip to surface. Circualte hole clean on bottom. POOH & L/D 6"1/2 BHA. RIH 7" csg in progress @42m.

6:00 am Status :
Install base plate & lateral valve.

Planned Operation :
Perform 7" cmt job. N/U & Pressure test BOP's & choke manifold.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	6.75	Drill from 310m to 604m.	DRL	6.75
06:45	1.00	Cumulative Teledrift survey time.	DEVI	7.75
07:45	1.00	Pump 3m3 sweep & circulate hole clean with FR=2000lpm, P=2250psi.	CIRC1	8.75
08:45	0.25	Flow check.	KCK	9.00
09:00	4.00	L/D kelly, set COM. POOH to surface.	REAM	13.00
13:00	1.75	RIH to 594m.	REAM	14.75
14:45	1.00	P/U kelly & ream down to 604m. Pump 3m3 sweep & circulate hole clean with FR=2000lpm, P=2300psi.	CIRC1	15.75
15:45	0.25	Flow check.	KCK	16.00
16:00	0.25	Drop Totco.	DEVI	16.25
16:15	3.75	L/D kelly, set COM. POOH to surface. B/O bit.	TRIP	20.00
20:00	1.50	Tidy Rig floor. Clean cellar & cut conductor pipe.	CAS	21.50
21:30	1.50	R/U csg running equipment.	CAS	23.00
23:00	0.25	Pre job safety meeting.	HSE	23.25
23:15	0.75	M/U shoe track & test floating equipment. RIH 7" csg in progress @42m.	CAS	24.00

Days w/o LTA : 226

Stop Cards

Parent Company	Quantity
Others	1
Total	1

Safety Incidents

Date	Type

Remarks

From 00h00 to 06h00 :
00h00 to 04h45 - Continue RIH 7" csg from 42m to 593m. Install well head.
04h45 to 05h30 - Resume RIH with circulation to 600m. Work string.
05h30 to 06h00 - Install base plate & 2"1/16 valve.

Cost
(USD)

Daily Cost : 46,926
Cumulative Cost : 357,711

Mud Costs

Cost (Loc)
6,326
Cum Field (Loc)
21,047

8"3/4, CASING & CEMENT

Daily progress	964.57
Drilling Hours	6.75
Midnight depth	1,981.6

Date
Report number
Water Depth
Activity Type & N°

9/14/2007
7
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" at 600m.

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Mud

Mud Type	Density (...)	ECD (lb/...	Mud Vol ...
Lime mud	9.10	9.43	
OW R...	Solids...	Sand	LGS (%)
5.9	0.1	5.6	
PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
17.0	13.0	2.0	58.00
Filtrate (mL/30...	HTHP Filtr (mL/3...	Oil Cuttl...	
5.8			
Mf (mL)	Pf (mL)	Pm (mL)	pH
2.60	1.80	12.00	12.5
Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	7	220	1,900

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
162.3	158.5	584.3

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	16.0
Drilling Water	m³	0.0	120.0
Diesel	L	5,320.0	15,760.0

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, HC-605-Z, 7114868	Drill Formation	1,017.1	964.57	6.75	142.9	1,981.63	18.75	17.6	2,248.1	528	150			68.3	63.9	66.1

Drill String Runs

BHA No.	BHA
1	HC-605-Z, Bit Sub w/ Float Valve, 6-1/2" Teledrift (1890), 1 x 6-1/2" Drill collar, 8-1/8" Stabilizer (#423), 8 x 6-1/2" Drill collar, XO, 8 x 4-3/4" Drill collar, 4-3/4" Hydraulic Jar (#1400-1375), 3 x 4-3/4" Drill collar, 12 x 3-1/2" HWDP

Date	Type
9/13/2007	Pre Spud Meeting
9/14/2007	Pre-Job Meeting

Supervisor
JC LEMINOUS

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
Drig Contractor	23
Operator - D&C	4
Service Cies	26

Cumul POB :53



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

BOP Test

Type	Last Date	Next Date
BOP's Test	9/15/2007	9/29/2007

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-237

Expected TD
5,594

Daily Summary :
RIH 7" csg to 600m. Cement same. N/U BOP's & pressure test same.

6:00 am Status :
RIH 6"1/8 bha in progress @91m.

Planned Operation :
Drill 6"1/8 phase to +/- 1705m.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	4.75	Continue RIH 7" csg from 42m to 593m.	CAS	4.75
04:45	0.75	Install well head & landing joint. RIH same with circulation to 600m.	WHASSY	5.50
05:30	0.75	Install base plate & 2"1/16 lateral valve.	WHASSY	6.25
06:15	0.75	Circulate hole with FR=1100lpm, P=430psi. Meanwhile R/D csg running equipment & R/U cement head & lines.	CAS	7.00
07:00	0.25	Pre job safety meeting.	HSE	7.25
07:15	1.75	Pressure test lines to 5000psi. Continue to circulate meanwhile mix slurries.	CEM	9.00
09:00	1.25	Perform cement job as per program. R/D Halliburton equipments.....R1.	CEM	10.25
10:15	0.50	L/D 7" landing joint & install tester plug.	CAS	10.75
10:45	0.25	Pre job safety meeting.	HSE	11.00
11:00	8.00	N/U BOP's.	BOPASSY	19.00
19:00	5.00	Pressure test BOP's to 500 / 3000psi - 5/10min :ok.	BOPTST	24.00

Well Name: AP-237

Days w/o LTA : 227

Stop Cards

Parent Company	Quantity
Total	1

Safety Incidents

Date	Type

Remarks

From 00h00 to 06h00 :

00h00 to 01h00 - Retieve tester plug. R/D testing equipment.
01h00 to 01h30 - Install wear bushing & pin lock.
01h30 to 02h15 - Prepare to RIH 6"1/8 BHA.
02h15 to 03h00 - M/U bit, Teledrift. Test same : ok.
03h00 to 06h00 - Continue RIH 6"1/8 BHA to 91m.

R1 : Cement job details

- Pump 30 bbl water spacer
- Drop bottom plug.
- Pump 38 bbl Lead Slurry 1.5 sg + 33 bbl Tail Slurry 1.9 sg.
- Drop top plug.
- Displace with 75.75 bbl fresh water FR= 7 - 2 bpm. Final Pressure = 1125 psi.
- Bump plug with 3000psi, 10 min ok.
- Bleed off 0.75 bbl. Float equipment OK. Observe good cement on surface. No losses.

Cost
(USD)

Daily Cost : 189,772
Cumulative Cost : 547,483

Mud Costs

Cost (Loc)
1,047
Cum Field (Loc)
22,094

8"3/4, CASING & CEMENT

Daily progress	0.00
Drilling Hours	
Midnight depth	1,981.6

Date
Report number
Water Depth
Activity Type & N°

9/15/2007
8
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,968.5

Next : 3 1/2" at 1702m.

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Mud

Mud Type	Density (...)	ECD (lb/...	Mud Vol ...
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OW R...	Solids...	Sand	LGS (%)	HGS (%)
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PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
------------	-------------	---------------	-------------

Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cuttl...
--------------------	--------------------	--------------

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)
0.0	32.8	551.5

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	16.0
Drilling Water	m³	0.0	120.0
Diesel	L	2,380.0	13,380.0

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)

Drill String Runs

BHA No.	BHA

Date	Type
9/13/2007	Pre Spud Meeting
9/14/2007	Pre-Job Meeting
9/15/2007	Pre-Job Meeting
9/15/2007	Pre-Job Meeting
Supervisor	
JC LEMINOUS	

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
Drig Contractor	23
Operator - D&C	5
Service Cies	9
Cumul POB :37	



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

BOP Test

Type	Last Date	Next Date
BOP's Test	9/15/2007	9/29/2007

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)
2,290.03	2,289.89	0.50	

WellBore

Branch
AP-237

Expected TD
5,594

Daily Summary :
M/U 6"1/8 BHA. RIH same to TOC. Drill out cement to 598m. Mud conversion.
Drill ahead to 754m.

6:00 am Status :
Drilling @ 913m.

Planned Operation :
Drill 6"1/8 phase to +/- 1705m.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	1.00	Retrieve tester plug & R/D testing equipment.	BOPTST	1.00
01:00	0.50	Install wear bushing & pin lock.	WHASSY	1.50
01:30	0.75	Prepare to RIH 6"1/8 BHA.	TRIP	2.25
02:15	0.75	P/U & M/U 6"1/8 bit, bit sub & teledrift. Test same : ok.	TRIP	3.00
03:00	5.00	Resume RIH bha#2 to 567m.	TRIP	8.00
08:00	2.50	Pressure test choke manifold. M/U flare lines.....R1.	BOPASSY	10.50
10:30	2.25	Tag cement @ 569m. Drill out cement to 596m.	CEMDRL	12.75
12:45	0.50	Fill poor boy & choke manifold. Check well control equipments.	KCK	13.25
13:15	2.25	Continue to wait on desilter motor to be installed.	NRMISC	15.50
15:30	0.25	Perform mud conversion.	CIRC1	15.75
15:45	0.25	Kick drill.	HSE	16.00
16:00	0.50	Drill out shoe & rat hole to 604m.	CEMDRL	16.50
16:30	0.50	Drill formation from 604m to 617m.	DRL	17.00
17:00	0.50	Take SCR's.	KCK	17.50
17:30	4.50	Drill from 617m to 754m.	DRL	22.00
22:00	1.75	Change out wash pipe. Pressure test :ok.	NRMISC	23.75
23:45	0.25	Cumulative Teledrift survey time.	DEVI	24.00

Days w/o LTA : 228

Stop Cards

Parent Company	Quantity

Safety Incidents

Date	Type

Remarks

From 00h00 to 06h00 :

00h00 to 01h30 - Drill from 754m to 799m.
01h30 to 01h45 - Take Teledrift survey : 1.5deg @ 794m.
01h45 to 02h45 - Drill from 799m to 837m.
02h45 to 03h00 - Take Teledrift survey : 1.5deg @ 832m.
03h00 to 04h15 - Drill from 837m to 875m.
04h15 to 04h30 - Circulate for hole cleaning.
04h30 to 04h45 - Take Teledrift survey : 2deg @ 870m.
04h45 to 06h00 - Drill from 875m to 913m.

R1:
Work on desilter motor from 11h00 to 22h30.

Cost
(USD)

Daily Cost : 44,141
Cumulative Cost : 591,624

Mud Costs

Cost (Loc)
9,541
Cum Field (Loc)
31,635

6"1/8, DRILLING

Daily progress	492.13
Drilling Hours	5.00
Midnight depth	2,473.8

Date
Report number
Water Depth
Activity Type & N°

9/16/2007
9
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,968.5

Next : 3 1/2" at 1702m.

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Mud

Mud Type	Density (...)	ECD (lb/...	Mud Vol ...
Lime mud	9.10	9.85	
OW R...	Solids...	Sand	LGS (%)
	5.9	0.1	5.9
PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
18.0	12.0	2.0	59.00
Filterate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...	
4.0			
Mf (mL)	Pf (mL)	Pm (mL)	pH
2.40	2.00	11.90	12.5
Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	7	200	2,100

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
337.1	37.1	851.5

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	16.0
Drilling Water	m³	0.0	120.0
Diesel	L	2,520.0	10,860.0

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, HC-505, 7302760	Drill Formation	1,981.6	492.13	5.00	98.4	492.13	5.00	15.4	1,479.4	277	150			77.2	72.8	75.0

Drill String Runs

BHA No.	BHA
2	HC-505, Bit Sub w/ FV, 4-3/4" Teledrift (# 2173), 4-3/4" SDC, 5-15/16" Stab (#492), 1 x 4-3/4" DC, 5-15/16" Stab (#490), 17 x 4-3/4" DC, 4-3/4" Hydraulic Jar (#1400-1375), 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
9/14/2007	Pre-Job Meeting
9/15/2007	Pre-Job Meeting
9/15/2007	Pre-Job Meeting
9/16/2007	Kick Drill

Supervisor
JC LEMINOUS

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
Drig Contractor	23
Operator - D&C	5
Service Cies	9
Cumul POB :37	



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

BOP Test

Type	Last Date	Next Date
BOP's Test	9/15/2007	9/29/2007

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)
2,854.33	2,854.04	2.00	
2,979.00	2,978.61	2.50	
3,106.96	3,106.44	2.50	
3,379.27	3,378.49	2.50	

WellBore

Branch
AP-237
Expected TD 5,594

Daily Summary :
Drill from 754m to 1096m. Stop operations due to rig personal.

6:00 am Status :
Perform Totco in progress.

Planned Operation :
Drill 6"1/8 phase to +/- 1705m.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	4.25	Drill from 754m to 875m.	DRL	4.25
04:15	0.25	Circulate for hole cleaning.	CIRC1	4.50
04:30	3.00	Drill with reduced parameters from 875m to 961m.	DRL	7.50
07:30	1.00	Total Teledrift survey time.	DEVI	8.50
08:30	2.00	Rig stopped due to rig personal.	NRPER	10.50
10:30	5.75	Resume to drill from 961m to 1048m.	DRL	16.25
16:15	0.50	Attempt several times to take Teledrift survey : no success.	NSDD	16.75
16:45	1.00	Circulate bottom's up & take survey with totco.	DEVI	17.75
17:45	3.00	Drill from 1048m to 1096m with reduced parameters (8k lbs on bit).	DRL	20.75
20:45	3.25	Rig stopped due to rig personal.	NRPER	24.00

Days w/o LTA : 229

Stop Cards

Parent Company	Quantity
Halliburton	6

Safety Incidents

Date	Type

Remarks

From 00h00 to 06h00 :
00h00 to 01h00 - Waiting on rig personal.
01h00 to 01h30 - Drill from 1096m to 1104m.
01h30 to 02h00 - Rig power failure.
02h00 to 06h00 - Drill from 1104m to 1153m.

Cost
(USD)

Daily Cost : 31,306
Cumulative Cost : 622,930

Mud Costs

Cost (Loc)
6,706
Cum Field (Loc)
38,341

6"1/8, DRILLING

Daily progress	1,122.05
Drilling Hours	16.00
Midnight depth	3,595.8

Date	9/17/2007
Report number	10
Water Depth	
Activity Type & N°	DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,968.5

Next : 3 1/2" at 1702m.

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Mud

Mud Type	Density (...)	ECD (lb/...	Mud Vol ...
Lime mud	9.18	9.85	
OW R...	Solids...	Sand	LGS (%)
6.6	0.1	6.3	
PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
19.0	14.0	2.0	65.00
Filtrate (mL/30...	HTHP Filtr (mL/3...	Oil Cutti...	
4.0			
Mf (mL)	Pf (mL)	Pm (mL)	pH
2.20	1.80	11.20	12.5
Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	7	200	2,200

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
8.2	66.7	793.0

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	16.0
Drilling Water	m³	0.0	120.0
Diesel	L	3,920.0	6,940.0

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, HC-505, 7302760	Drill Formation	2,473.8	1,122.05	16.00	70.1	1,614.17	21.00	8.8	1,638.9	277	150			94.8	88.2	90.4

Drill String Runs

BHA No.	BHA
2	HC-505, Bit Sub w/ FV, 4-3/4" Teledrift (# 2173), 4-3/4" SDC, 5-15/16" Stab (#492), 1 x 4-3/4" DC, 5-15/16" Stab (#490), 17 x 4-3/4" DC, 4-3/4" Hydraulic Jar (#1400-1375), 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
9/14/2007	Pre-Job Meeting
9/15/2007	Pre-Job Meeting
9/15/2007	Pre-Job Meeting
9/16/2007	Kick Drill

Supervisor
JC LEMINOUS

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

Bit Dull

Bit Dull

POB

Type	Count
Drig Contractor	23
Operator - D&C	4
Service Cies	9
Cumul POB :36	



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

Daily Summary :
Drill from 1446m to 1712m. Circulate hole. Pull out to 7" csg shoe. Resume RIH in progress @728m.

6:00 am Status :
POOH & L/D drill string in progress @1344m.

Planned Operation :
L/D drill string. Perform WL logging.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	8.00	Drill from 1446m to 1602m.	DRL	8.00
08:00	0.25	Take SCR's.	KCK	8.25
08:15	1.50	Drill from 1602m to 1620m.	DRL	9.75
09:45	1.00	Change out wash pipe.	NRHAN	10.75
10:45	4.50	Drill from 1620m to 1712m.	DRL	15.25
15:15	1.00	Pump 3m3 havis pill & circulate hole clean with FR=1050lpm, P=2200psi.	CIRC1	16.25
16:15	0.25	Take SCR's, Flow check.	KCK	16.50
16:30	5.00	L/D kelly, set COM. POOH from 1712m to 1015m.	REAM	21.50
21:30	0.50	Circulate B/U to clean hole	CIRC1	22.00
22:00	1.50	Resume pull out from 1015m to 586m.	REAM	23.50
23:30	0.50	RIH from 586m to 728m.	REAM	24.00

BOP Test

Type	Last Date	Next Date
BOP's Test	9/15/2007	9/29/2007

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-237

Expected TD
5,594

Days w/o LTA : 231

Stop Cards

Parent Company	Quantity

Safety Incidents

Date	Type

Remarks

From 00h00 to 06h00 :

00h00 to 02h00 - Continue RIH from 728m to 1696m.
02h00 to 02h30 - P/U kelly & ream down to 1712m.
02h30 to 03h45 - Pump havis & circulate hole clean with FR=1050lpm, P=2200psi.....R1.
03h45 to 04h00 - Flow check
04h00 to 04h15 - Drop Totco.
04h15 to 06h00 - L/D kelly, set COM, POOH & L/D drill string in progress @1344m.

R1: TG=8%

Cost
(USD)

Daily Cost : 29,208
Cumulative Cost : 682,176

Mud Costs

Cost (Loc)
4,608
Cum Field (Loc)
48,387

6"1/8, DRILLING

Daily progress	872.70
Drilling Hours	14.00
Midnight depth	5,616.8

Date
Report number
Water Depth
Activity Type & N°

9/19/2007
12
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,968.5

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Next : 3 1/2" at 1702m.

Mud

Mud Type	Density (...)	ECD (lb/...)	Mud Vol ...
Lime mud	9.35		
OW R...	Solids...	Sand	LGS (%)
	7.4	0.1	7.4
PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
20.0	16.0	2.0	65.00
Filterate (mL/30...	HTHP Filt (mL/3...	Oil Cuttl...	
4.0			
Mf (mL)	Pf (mL)	Pm (mL)	pH
1.60	1.30	11.00	12.5
Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	6	240	25,000

Comment

Work on desilter motor

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
8.2	139.0	581.7

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	16.0
Drilling Water	m³	0.0	120.0
Diesel	L	4,840.0	12,900.0

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, HC-505, 7302760	Drill Formation	4,744.1	872.70	14.00	62.3	3,635.17	54.75	15.4	2,103.0	277	150			112.4	105.8	110.2

Drill String Runs

BHA No.	BHA
2	HC-505, Bit Sub w/ FV, 4-3/4" Teledrift (# 2173), 4-3/4" SDC, 5-15/16" Stab (#492), 1 x 4-3/4" DC, 5-15/16" Stab (#490), 17 x 4-3/4" DC, 4-3/4" Hydraulic Jar (#1400-1375), 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
9/14/2007	Pre-Job Meeting
9/15/2007	Pre-Job Meeting
9/15/2007	Pre-Job Meeting
9/16/2007	Kick Drill
Supervisor	JC LEMINOUS

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
Drig Contractor	23
Operator - D&C	5
Service Cies	11
Cumul POB :39	



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

BOP Test

Type	Last Date	Next Date
BOP's Test	9/15/2007	9/29/2007

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	Branch
5,603.67	5,602.32	1.50		AP-237

WellBore

Expected TD
5,594

Daily Summary :

RIH to bottom. Circulate hole clean. POOH & L/D drill string. WL logging in progress.

6:00 am Status :

Continue WL logging.

Planned Operation :

Complete wire line logging. RIH 3"1/2 csg.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	2.00	Continue RIH from 728m to 1696m.	REAM	2.00
02:00	0.50	P/U kelly & ream down to 1712m.	REAM	2.50
02:30	1.25	Pump havis & circulate hole clean with FR=1050lpm, P=2200psi. Max gas = 8%.	CIRC1	3.75
03:45	0.25	Flow check.	KCK	4.00
04:00	0.25	Drop Totco.	DEVI	4.25
04:15	5.25	L/D kelly, set COM, POOH & L/D drill string to 600m.	TRIP	9.50
09:30	0.25	Flow check	KCK	9.75
09:45	1.75	Continue to POOH & L/D drill string from 600m to top BHA.	TRIP	11.50
11:30	0.50	Flow check. B/O kelly.	KCK	12.00
12:00	3.00	L/D BHA#2. Retrieve Totco. B/O bit.	TRIP	15.00
15:00	0.50	R/U WL logging equipment.	ELOG	15.50
15:30	0.25	Pre job safety meeting.	HSE	15.75
15:45	8.25	Perform WL logging as per program.	ELOG	24.00

Run#1 : AITH - SP - DSI
Run#2 : PEX - GR.

Days w/o LTA : 232

Stop Cards

Parent Company	Quantity

Safety Incidents

Date	Type

Remarks

From 00h00 to 06h00 :

00h00 to 06h00 - Continue Wire line logging.

Run#3 : CMR - GR.

Run#4 : MDT

Cost
(USD)

Daily Cost : 25,647
Cumulative Cost : 707,823

Mud Costs

Cost (Loc)
1,047
Cum Field (Loc)
49,434

6"1/8, DRILLING

Daily progress	0.00
Drilling Hours	
Midnight depth	5,616.8

Date
Report number
Water Depth
Activity Type & N°

9/20/2007
13
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,968.5

Next : 3 1/2" at 1702m.

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Mud

Mud Type	Density (...)	ECD (lb/...)	Mud Vol ...
Lime mud	9.35		
OW R...	Solids...	Sand	LGS (%)
7.7	0.1	7.4	
PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
22.0	12.0	2.0	65.00
Filterate (mL/30...	HTHP Filtr (mL/3...	Oil Cutti...	
4.0			
Mf (mL)	Pf (mL)	Pm (mL)	pH
2.40	1.90	11.00	12.5
Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	6	240	2,500

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
0.0	87.4	494.3

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	16.0
Drilling Water	m³	0.0	120.0
Diesel	L	2,800.0	10,100.0

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, HC-505, 7302760		5,616.8	0.00	0.00		3,635.17	54.75	0.0	0.0	0	0			0.0	0.0	0.0

Drill String Runs

BHA No.	BHA
2	HC-505, Bit Sub w/ FV, 4-3/4" Teledrift (# 2173), 4-3/4" SDC, 5-15/16" Stab (#492), 1 x 4-3/4" DC, 5-15/16" Stab (#490), 17 x 4-3/4" DC, 4-3/4" Hydraulic Jar (#1400-1375), 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
9/15/2007	Pre-Job Meeting
9/15/2007	Pre-Job Meeting
9/16/2007	Kick Drill
9/20/2007	Pre-Job Meeting

Supervisor
JC LEMINOUS

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
Drig Contractor	23
Operator - D&C	7
Service Cies	11
Cumul POB :41	



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

BOP Test

Type	Last Date	Next Date
BOP's Test	9/15/2007	9/29/2007

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-237

Expected TD
5,594

Daily Summary :
Complete WL logging. RIH 3.5" csg in progress @593m.

6:00 am Status :
RIH 3.5" csg in progress @1584m.

Planned Operation :
RIH 3.5" csg to 1708m. Cement same. N/D BOP's. N/U X-mas tree.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	12.50	Complete WL logging as per program. R/D WL logging equipment.	ELOG	12.50
12:30	0.50	Retrieve wear bushing.	WHASSY	13.00
13:00	0.75	M/U washing tool. Flush wellhead & BOP's.	WHASSY	13.75
13:45	0.25	Perform dummy run.	CAS	14.00
14:00	1.75	R/U csg running equipment.	CAS	15.75
15:45	1.25	M/U shoe track & test same. ok.	CAS	17.00
17:00	0.75	Change out dies on elevator.	NSTUB	17.75
17:45	0.25	Resume RIH 3.5" csg to 60m.	CAS	18.00
18:00	0.50	Change out elevator	NSTUB	18.50
18:30	1.50	Resume RIH 3.5" csg from 60m to 183m.	CAS	20.00
20:00	0.25	Pre job safety meeting.	HSE	20.25
20:15	3.75	Resume RIH 3.5" csg to 593m.	CAS	24.00

Days w/o LTA : 233

Stop Cards

Parent Company	Quantity
Geoservices	5
Others	1
Schlumberger	1
Total	3

Safety Incidents

Date	Type

Remarks

From 00h00 to 06h00 :

00h00 to 06h00 - Continue RIH 3.5" csg to 1584m.

Cost
(USD)

Daily Cost : 112,494
Cumulative Cost : 820,317

Mud Costs

Cost (Loc)
2,481
Cum Field (Loc)
51,915

6"1/8, CASING & CEMENT

Daily progress	0.00
Drilling Hours	
Midnight depth	5,616.8

Date
Report number
Water Depth
Activity Type & N°

9/21/2007
14
DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,968.5
3 1/2	5,604.0

Next : 3 1/2" at 1708m.

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Mud

Mud Type	Density (...)	ECD (lb/...)	Mud Vol ...
Lime mud	9.35		
OW R...	Solids...	Sand	LGS (%)
	7.7	0.1	7.4
PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
22.0	12.0	2.0	65.00
Filterate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...	
4.0			
Mf (mL)	Pf (mL)	Pm (mL)	pH
2.40	1.90	11.00	12.5
Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	6	240	2,500

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
		494.3

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	16.0
Drilling Water	m³	0.0	120.0
Diesel	L	2,000.0	18,100.0

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)

Drill String Runs

BHA No.	BHA

Date	Type
9/16/2007	Kick Drill
9/20/2007	Pre-Job Meeting
9/21/2007	Pre-Job Meeting
9/21/2007	Pre-Job Meeting
Supervisor	
JC LEMINOUS	

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

Bit Dull

Bit Dull

POB

Type	Count
Drig Contractor	22
Operator - D&C	5
Service Cies	18
Cumul POB :45	



TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Daily Drilling Report

Rig :ODE-39, ENSIGN

Well Name: AP-237

BOP Test

Type	Last Date	Next Date
BOP's Test	9/15/2007	9/29/2007

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	Branch
				AP-237

WellBore

Expected TD
5,594

Daily Summary :
RIH 3.5" to 1708m. Cement same. Run pack off seal & test same. Install TWCV.
N/D BOP's. N/U X-mas tree & pressure test same.

6:00 am Status :

Planned Operation :
DTM from AP-237 to AP-233. Distance between locations = 3.5Km.

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	6.25	Continue RIH 3.5" csg from 593m to 1594m.	CAS	6.25
06:15	0.25	Break circulation with FR=1050lpm, P=1040psi.	CIRC1	6.50
06:30	1.00	Resume RIH from 1594m to 1708m. Set csg hanger.	CAS	7.50
07:30	2.00	Circulate hole with FR=1050lpm, P=1300psi. Meanwhile R/D Weatherford equipment & R/U Halliburton lines.	CEM	9.50
09:30	0.25	Pre job safety meeting.	HSE	9.75
09:45	3.50	Perform cement job as per program.....R1.	CEM	13.25
13:15	0.75	R/D Halliburton equipment.	CEM	14.00
14:00	0.75	Wash BOP's & wellhead.	WHASSY	14.75
14:45	2.25	Set Pack off seal (3rd attempt) & pressure test same to 5000psi.....R2.	WHASSY	17.00
17:00	1.00	Geoservices set TWCV.	SLICK	18.00
18:00	0.25	Pre job safety meeting	HSE	18.25
18:15	4.75	N/D BOP's	BOPASSY	23.00
23:00	1.00	N/U X-mas tree & pressure test same to 5000psi.	XTASSY	24.00
----- End of Operations on AP 237 - 22 Sep 2007 at 24:00 AM ----- ----- Rig move from AP 237 to AP 233 -----				

Days w/o LTA : 234

Stop Cards

Parent Company	Quantity
Halliburton	2

Safety Incidents

Date	Type

Remarks

From 00h00 to 06h00 :

00h00 to 06h00 - Prepare for DTM to AP233.

R1: Cement job Details.

- Pump 50bbl Tuned spacer (1.20sg)
- Drop calibration plug and install cement head.
- Pump 48.3bbl mud flush.
- Bump calibration plug to 2900psi. Disc broke.
- Continue Pump mud flush & super flush.
- Drop bottom plug.
- Pump 100 bbl lead slurry (1.15sg).
- Pump 24 bbl tail slurry (1.9sg).
- Flush lines with drill water & filtered brine.
- Drop top plug.
- Displace same with 48.3bbl filtered brine.
- Bump top plug. Final pressure= 1120 psi.
- Pressure test tubing to 3000 psi / 10 min.
- Bleed off pressure. 0.5bbl returned.

R2: Broke bottom exterior seal on two first attempts. Wash wellhead.

Cost
(USD)

Daily Cost : 345,832
Cumulative Cost : 1,166,149

Mud Costs

Cost (Loc)
2,602
Cum Field (Loc)
54,517

6"1/8, CASING & CEMENT

Daily progress	0.00
Drilling Hours	
Midnight depth	5,616.8

Date	9/22/2007
Report number	15
Water Depth	
Activity Type & N°	DEV 1

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,968.5
3 1/2	5,604.0

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,851.7	3,850.6	Avile
5,242.8	5,241.5	Upper Mulichinco
5,301.8	5,300.6	Middle Mulichinco
5,508.5	5,507.2	Lower Mulichinco

Mud

Mud Type	Density (...)	ECD (lb/...	Mud Vol ...
Lime mud	9.35		
OW R...	Solids...	Sand	LGS (%)
	7.7	0.1	7.4
PV OR (cp)	YP OR (l...	YS Calc (...)	Marsh vl...
14.0	11.0	2.0	50.00
Filtrate (mL/30...	HTHP Filtr (mL/3...	Oil Cutti...	
4.0			
Mf (mL)	Pf (mL)	Pm (mL)	pH
2.40	1.90	11.00	12.5
Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	5	240	2,500

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
0.0	494.3	0.0

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	16.0
Drilling Water	m³	0.0	120.0
Diesel	L	2,800.0	15,300.0

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)

Drill String Runs

BHA No.	BHA

Date	Type
9/21/2007	Pre-Job Meeting
9/21/2007	Pre-Job Meeting
9/22/2007	Pre-Job Meeting
9/22/2007	Pre-Job Meeting
Supervisor	
JC LEMINOUS	

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 VesselsH...

Vessel Name	Type

POB

Type	Count
Drig Contractor	22
Operator - D&C	3
Service Cies	18
Cumul POB :43	