

TOTAL AUSTRAL

Drilling & Completion Department Buenos Aires - Argentina

W:\Entity\BUE\GO\OF\-Special\03-Onshore\Campaña AP-2007\AP-237 - 32\Reports\EWR

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	R	14/07/08
Revised by	Diego SERVIERES	D/C Fluids Engineer	DB &	14/07/08
	Fabián VALENTINI	Head of Wells & Completion	163 POTING	18/07/08
	Pierre PUYO	Head of Onshore Drilling	Huy	21/0+/08
Approved by	Matthieu NAEGEL	D/C Manager	n. AFKEL	4/07/08

DISTRIBUTION LIST

TOTAL AUSTRAL	TOTAL FRANCE
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1 Well File	1	DGEP/TDO/FP/MTH Paris
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- 1 PAN AMERICAN ENERGY LLC
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- 10-DAILY DRILLING REPORTS



AGUADA PICHANA FIELD - Development Onshore Argentina

 Well :
 AP-237

 Rig :
 ODE-39

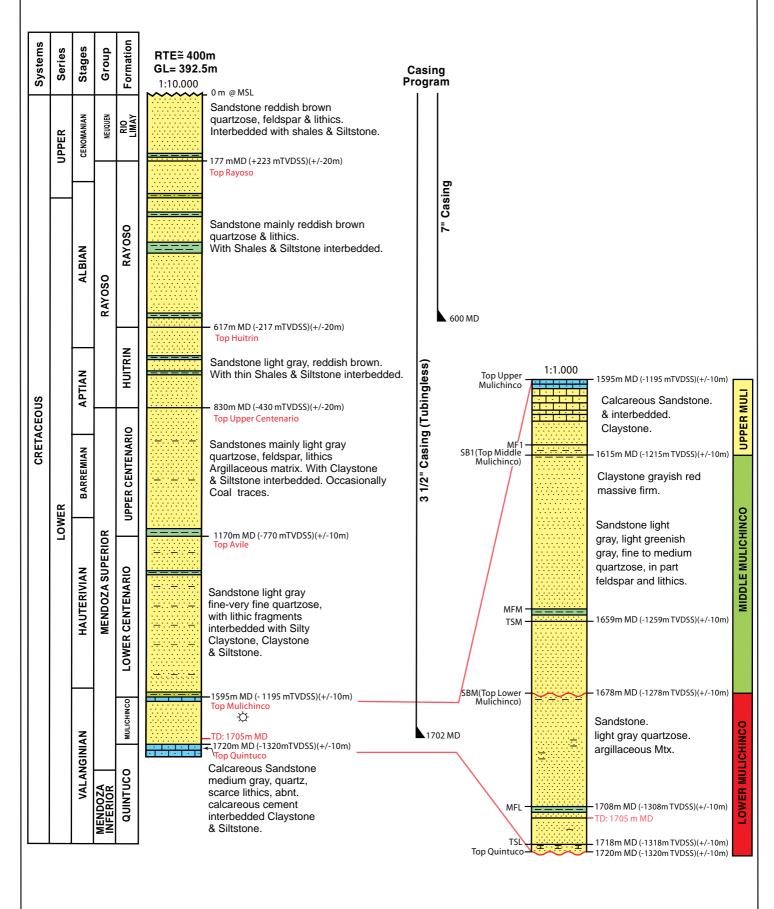
 Start date :
 08/09/2007

 End date :
 22/09/2007

1) STRATIGRAPHIC COLUMN & WELL OUTLINE



Aguada Pichana Field AP-237 Well / Expected Stratigraphic Column





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

Branches | Branch UWI **Parent Branches** Pilot Hole Comment **Branch Name** AP-237 AP-237 No Start Depth (ftKB) **Kick Off Method** Vertical Section Direction (°)

Deviation Surveys

0.0

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

Survey Data (calculation method is minimum radius of curvat

Survey D	Survey Data (calculation method is minimum radius of curvature)												
_					TVD		•		DLS	Depart	Turn	Build	Survey
Date	MD (ftKB)	Incl (°)	Azm (°)	Method	(ftKB)	VS (ft)	NS (ft)	EW (ft)	(°/100ft)	(ft)	(°/100ft)	(°/100ft)	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	
4		·	·										



AGUADA PICHANA FIELD - Development Onshore Argentina

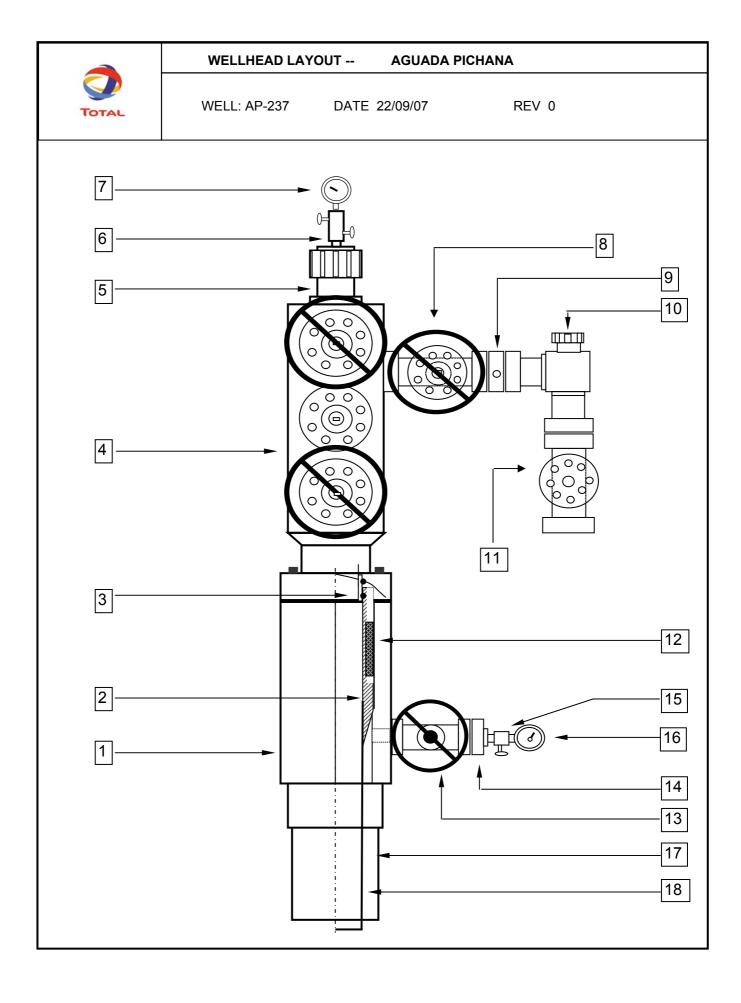
 Well :
 AP-237

 Rig :
 ODE-39

 Start date :
 08/09/2007

 End date :
 22/09/2007

2) **COMPLETION DIAGRAM**





WELLHEAD LAYOUT -- AGUADA PICHANA

WELL: AP-237 DATE: xx-09-07 REV 0

N٥	Description	PIN N°	Qty
1	Integrated Well head 7 1/16" 5000 psi	37968	1
2	Tubing hanger 7 1/16" x 3 1/2" SEC 10.5 lb/ft	72338	1
3	Metal seal sleeve assy	72346	1
4	Solid block tree 3 1/8" 5000	72340	1
5	Top tree cap 3 1/8" 6 1/2" Otis Quick union		1
6	Needle valve 1/2" NPT 5000	38006	1
7	Pressure gauge 0-5000 1/2" NPT	38025	1
8	Gate Valve "FL" 3 1/8" 5000 Psi.	72342	1
9	Instrument flange 3 1/16" w/two 1/2" NPT	72343	1
10	Choke positive H2 3 1/8" 5000	72344	1
11	Gate Valve "FL" 3 1/8" 5000 Psi.	72342	1
12	Pack off	39214	1
13	Gate valve flanged 2 9/16" x 5000	13874	1
14	Blind flange 2 9/16" 5000 x 1/2" NPT	13874	1
15	Needle valve angle 1/2" NPT 5000	38006	1
16	Pressure gauge 0-5000 1/2" NPT	38025	1
17	Casing 7"		
18	Casing 3 1/2" 9 Lb/Ft L80 Sec VC 13	37958	145
	<u> </u>		
	<u> </u>		



TOTAL AUSTRAL

COMPLETION DIAGRAM

TUBINGLESS 3.1/2"

FIELD: A PICHANA

WELL: AP-237

DATE: 22-09-07

WELL TYPE : GAS COMPLETION DATE: 22-09-07 DEVIATION: PAGE: REV.: 0

WELL TYPE : GAS	COMPLETION DATE: 22-09-07 DEVIATION: LAST WORKOVER DATE: KOP:						PAGE: REV.: 0					
PRODUCER	IT.			DESCRIPT		KUP:	Mini ID	Maxi OD	Length	Bot Depth		
†	**	41		DESCRIFT	ION		in.	in.	m.	m.		
	1	PT	7GL				111.	III.	6.70	1116		
 ← <u>1</u> ↓	2	1 000		MPACT HEA	ND.		0.000	0.000	0.00	6.70		
←[3]	3					I/FT SEC 7.1/16"-	2.984	7.062	0.25	6.95		
	4	A 1500			-80 - 9,2 LB/F		2.992	3.500	1.12	8.07		
*	6				B/FT L-80 CF		2.992	3.500	686.84	694.91		
					-80 - 9,2 LB/F		2.992	3.500	3.06	697.97		
	7	1 PU	IP JOINT 3	3.1/2" SEC L-	-80 - 9,2 LB/F	T CR13	2.992	3.500	2.14	700.11		
	8	1 HA	LLIBURTO	ON 2.81" "X"	NIPPLE 3.1/2	" NEW VAM	2.813	3.500	0.36	700.47		
	9	1 PU	JP JOINT 3	3.1/2" SEC L-	-80 - 9,2 LB/F	T CR13	2.992	3.500	3.10	703.57		
	10				.B/FT L-80 CF	William Control	2.992	3.500	876.87	1,580.44		
	11	2 2 2 2 2			-80 - 9,2 LB/F		2.992	3.500	2.18	1,582.62		
	12					2" NEW VAM	2.666	3.197	0.27	1,582.89		
4 6	13				-80 - 9,2 LB/F		2.992	3.500	2.13	1,585.02		
			Control of the second second	THE COURSE OF STREET AND ADDRESS OF STREET	-80 - 9,2 LB/F	71 (51 (52 (10 (10))) A	2.992	3.500	2.11	1,587.13		
					-80 - 9,2 LB/F		2.992	3.500	3.06	1,590.19		
	14				.B/FT L-80 CF		2.992	3.500	96.71	1,686.90		
	15	200	T-50115 - 15 F-1995		THE RESERVE OF THE PARTY OF THE PARTY.	NEW VAM 10,5 L	2.992 2.992	3.500 3.500	0.59 9.75	1,687.49 1,697.24		
	16 17				B/FT L-80 CF	William Co.	2.992	3.500	9.75	1,697.24		
	18				B/FT L-80 CF		2.992	3,500	0.63	1,705.99		
■ ■ ■ 8	10	I FL	UAT SHUE	3-1/2 10,5	LB/FT N 80	SEC	2.332	3,500	0.03	1,707.02		
	-							Y				
	-	DH	ISV cali	hrada a 23	Bar coloca	la 27.10.07		ř	-			
	2 3		15 v Cum	brada a 25	Dai coloca	uu 27-10-01						
						0		0 0				
						20		ji ii				
		8 8				8		9 9				
599◢ ▶												
						2		, T				
	REMARKS											
10	ALL DEPTHS ARE ROTARY TABLE LEVEL REFERENCE											
	HALLIBURTON 2,81" "X" NIPPLE UNDER TOP CEMENT HALLIBURTON 2,81" "XN" NIPPLE OVER TOP UMZ											
	HAL	LIBURT(Min ID Maxi OD Depth (m)						
			CA	SING RECO	OKD		Min ID			200		
							(inch)	(inch)	Тор	Bottom		
	7" C	asing - 2	23 Lb/ft - f	N-80 SEC			6.366	7.000	0.00	599.34		
	TUB	IING 3.1/2	2" SEC 9,2	LB/FT L-80	CR13	2.992	3.500	0.00	1,707.48			
← 12					DEDEAD		9 9					
1047		DECES	VOIDO	TOD		IONS RECORD	OUNG					
UMZ		RESER'	VUIRS	TOP	воттом	H : (m)	GUNS		REMARKS			
MM7 ■ 14		UMZ										
MMZ		UNIZ	9	1620.00	1635.00	15.00	2"	E	TPP 3 AG	+2 DB		
LMZ ■				1020.00	1000.00	13.00	~	3	111340	1201		
LIMZ 1		MMZ	7	1650.00	1655.00	5 mts	2"	5	TPP 3 AG	+2 DP		
15		1411412	3750	,555,50	,000.00	Jing	-	3	570			
22125 - OF SWACO												
1707,48 mts												
		LMZ	7									
<u> </u>	.0			0 0				13				



AGUADA PICHANA FIELD - Development Onshore Argentina

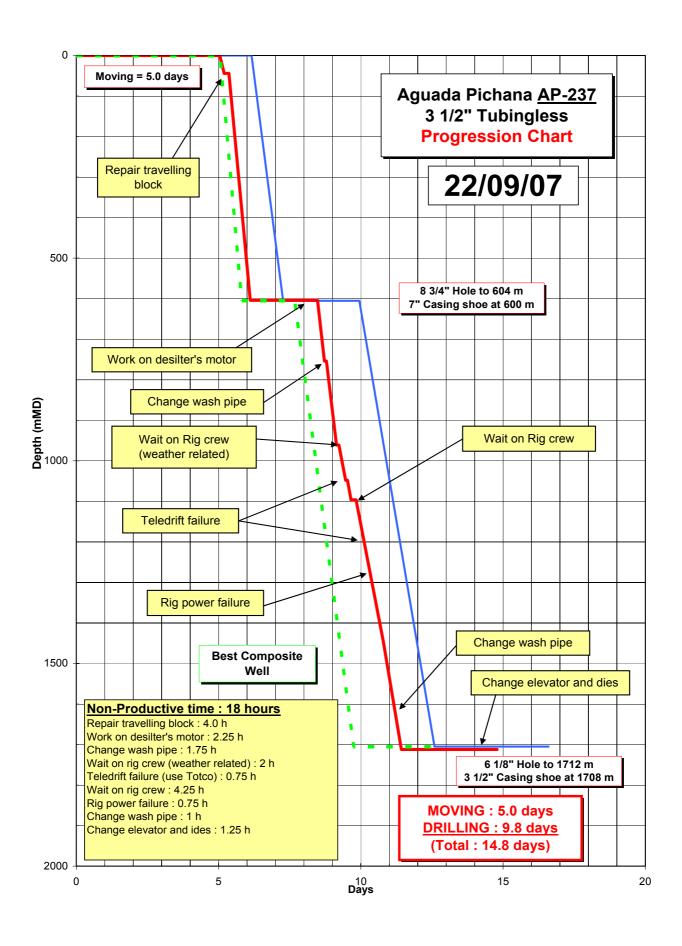
 Well :
 AP-237

 Rig :
 ODE-39

 Start date :
 08/09/2007

 End date :
 22/09/2007

3) PROGRESSION CHART & TIME ANALYSIS



		A	P tubin	gless	3 1/2'	' Ope	erations				
Real	l Phas			DDR	Depth	Depth		Phase s	starting day	Time	
Start date		[h]		#	Plan	Real	Operations	[days]		difference	
Sat 8/Sep/07 5:00	Best	Margin Planned	Real		[m]	[m]	·	Planned	Real	see note belov	
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		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		Run 7" csg to 605 m			2d 23hr early	
Sat 15/Sep/07 4:45			1.50	7	605		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		Safety meeting - Drillout cement - FIT			1d 11hr early	
Sun 16/Sep/07 16:30			5.75	9	605		Drill to 1200 m			1d 5hr early	
Sun 16/Sep/07 22:15			1.75	9	605		Circulate & wiper trip			1d 3hr early	
Mon 17/Sep/07 0:00		63.36	8.50	9	1705		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		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		Wash Well Head Pack Off area - Run Pack Off - Test			2d 2hr early	
Sat 22/Sep/07 17:00			1.00	15	1705		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		N/D BOP - Active Lock Ring - Pull test - Install X-mas Tree			1d 19hr early	
Sun 23/Sep/07 0:00				15	1705		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		



Well Activity History

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
		•		·

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</drilled></depth>
	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</drilled></depth>
	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</drilled></depth>
0////000=	AP 237.
9/11/2007	Report Number: 4; Depth Start: <depth start?="">; Depth progress : <drilled length?="">; Phase: MOVING, MOVING; Rig up on location. Raise</drilled></depth>
	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</drilled></depth>
0//0/000=	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 &
0////000=	drill formation to 310m. Control inclinaison 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.
0// = /000=	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
0/40/0007	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
0/47/0007	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
0/40/0007	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
0/00/0007	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.
0/04/0007	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
0/00/0007	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.



9/19/2007 09:45

TOTAL Austral

Contractor Downtime Analysis

Well Name: AP-237

1.00

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

Slot : North : East :

6"1/8, DRILLING

NRHAN

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

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							
				Dur			
Start Date	Phase	Code	Comment	(hrs)			
9/13/2007 09:45	8"3/4, DRILLING	NRHAN	Repair travelling blockR1.	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			

Change out wash pipe.



Time Analysis Summary per Phase TOTAL Austral

Well Name: AP-237

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

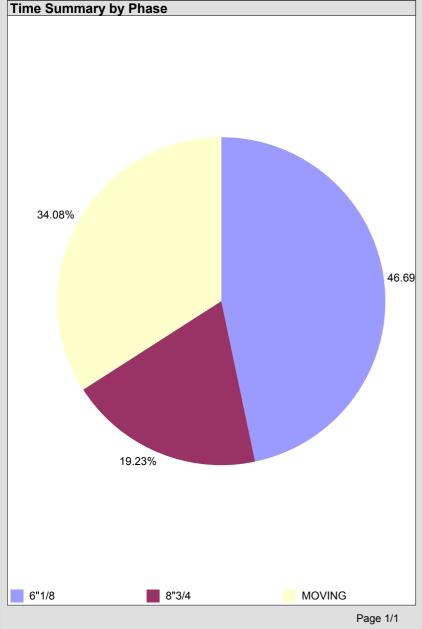
Slot: North: East:

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

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

Time Summary by O	% Total Time	
Code	(%)	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



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Service Companies Downtime Analysis

TOTAL Austral

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

Downtime Summary		
Code	% Total Time (%)	Dur (hrs)
NSDD	0.21	0.75
NSTUB	0.35	1.25

				Dur
Start Date	Phase	Code	Comment	(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



PT - NPT

Well Name: AP-237

Country : ArgentinaSlot :Water Depth :Activity : DEV N° 1Total AFE+Supp (Loc) :Field : AGUADA PICHANANorth :Location : OnshoreStart Date : 9/8/2007Field Est (Loc) : 1,166,149Platform : N/AEast :Well shape : VertEnd Date : 9/23/2007Final Depth : 5,616.8

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

Productive Time Summary		
Code	Dur (hrs)	% Total Time (%)
ASSY	84.50	23.80
BOPASSY	15.25	4.30
BOPTEST	6.00	1.69
CAS	25.75	7.25
CEM	9.25	2.61
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

DownTime Summary					
Code	Dur (hrs)	% Total Time (%)			
NRHAN	5.00	1.41			
NRMISC	4.75	1.34			
NRPER	6.25	1.76			
NSDD	0.75	0.21			
NSTUB	1.25	0.35			



Phase Time Log Summary

Well Name: AP-237 Phase: 6"1/8

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

Phases										
6"1/8, DRILLIN	G									
Phase		Sub-Phase		Planned Star	t Depth	Planned E	End Depth (Actual	Start Depth (ft	Actual End Depth (ft
6"1/8		DRILLING		1,984	1.9	5,	593.8		1,981.6	5,616.8
P50 Dur (days)	P90	Dur (days)	P90 C	um Days (d	P10 Dur (days)	P10 Cum Day	/s (d	Actual Start Date	Actual End Date
5.40					4.	66	12.41		9/16/2007	9/21/2007
P50 Cost		P90 Cost		P10 Cost	'	Cum Cost	t(Loc)	Cum C	Cost Var ML	Mud Cost(Loc)
						76	6,414		-766,414	
Summary										
6"1/8, CASING	& C	EMENT								
Phase		Sub-Phase		Planned Star	t Depth	Planned E	End Depth (Actual	Start Depth (ft	Actual End Depth (ft
6"1/8		CASING & CEM	ENT	5,593	3.8	5,	593.8		5,616.8	5,616.8
P50 Dur (days)	P90	0 Dur (days)	P90 C	um Days (d	P10 Dur (days)	P10 Cum Day	/s (d	Actual Start Date	Actual End Date
1.36					1.	16	13.57		9/21/2007	9/23/2007

13.57 P50 Cost P90 Cost P10 Cost Cum Cost(Loc) Cum Cost Var ML Mud Cost(Loc) 1,166,149 -1,166,149

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	
кск	4	PT	0.75	
кск	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 Unsched Typ grouped by Phase

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



Phase Time Log Summary

Well Name: AP-237 Phase: 8"3/4

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

Phase	Sub-Phase	Planned Star	t Depth	Planned E	End Depth (Actua	Start Depth (ft	Actual End Depth (ft
8"3/4	DRILLING	0.0)	1,	984.9		0.0	1,981.6
P50 Dur (days)	P90 Dur (days)	P90 Cum Days (d	P10 Dur (days)	P10 Cum Day	ys (d	Actual Start Date	Actual End Date
1.69			1.3	27	6.32		9/13/2007	9/14/2007
P50 Cost	P90 Cost	P10 Cost	1	Cum Cos	t(Loc)	Cum (Cost Var ML	Mud Cost(Loc)
				34	19,890		-349,890	

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

CASING & CEMENT 1,984.9 1,984.9 1,017.1 1,981.6 **Actual End Date** P50 Dur (days) P90 Dur (days) P90 Cum Days (d... P10 Dur (days) P10 Cum Days (d... | Actual Start Date 9/14/2007 9/16/2007 1.43 7.75

P50 Cost P90 Cost P10 Cost Cum Cost(Loc) Cum Cost Var ML Mud Cost(Loc) 551,621 -551,621

Summary

2.21

Time I on Summary grouped by Phase

I Ime Log	Summary grouped by Phase		
Code	User Code	Unschd Type	Dur (hrs)
BOPASSY	3	PT	8.00
BOPTEST	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 Unsched Typ grouped by Phase

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

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Phase Time Log Summary Phase: MOVING

nase: MOVING Well Name: AP-237

Country : Argentina | Slot : | Water Depth : Field : AGUADA PICHANA | North : Location : Onshore | Platform : N/A | East : | Well shape : Vert

Spud Date : 9/13/2007 Objective : Flowing Gas Status : Completed

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

272,407 -272,407 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 Unsched Typ grouped by Phase

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

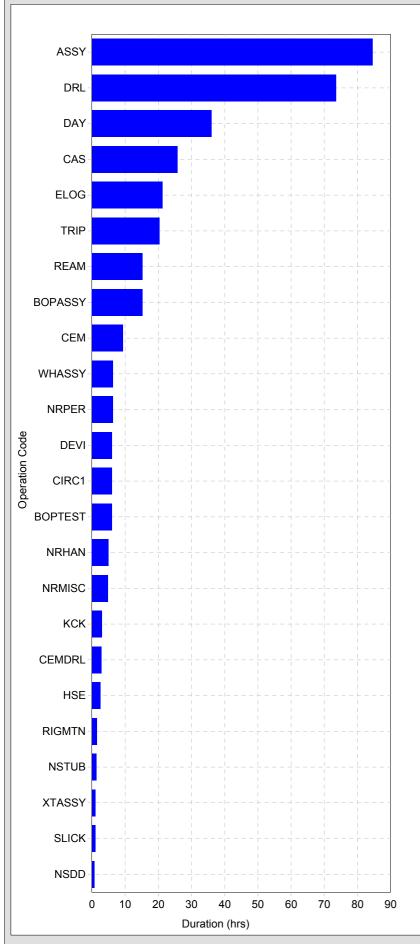
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Time Log Summary - Bar Graph

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



Code ASSY DRL DAY CAS ELOG FRIP REAM BOPASSY CEM WHASSY	Total Time (%) 23.80 20.70 10.14 7.25 5.99	Dur (hrs) 84.50 73.50 36.00
ASSY DRL DAY CAS ELOG FRIP REAM BOPASSY CEM WHASSY	23.80 20.70 10.14 7.25	84.50 73.50 36.00
DRL DAY CAS ELOG FRIP REAM BOPASSY CEM WHASSY	20.70 10.14 7.25	73.50 36.00
DAY CAS ELOG FRIP REAM BOPASSY CEM WHASSY	10.14 7.25	36.00
CAS ELOG FRIP REAM BOPASSY CEM WHASSY	7.25	
ELOG TRIP REAM BOPASSY CEM WHASSY		
TRIP REAM BOPASSY CEM WHASSY	5.99	25.75
REAM BOPASSY CEM WHASSY		21.25
BOPASSY CEM WHASSY	5.70	20.25
CEM WHASSY	4.30	15.25
WHASSY	4.30	15.25
	2.61	9.25
10000	1.76	6.25
NRPER	1.76	6.25
BOPTEST	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
KTASSY	0.28	1.00
NSDD	00	



AGUADA PICHANA FIELD - Development Onshore Argentina

 Well :
 AP-237

 Rig :
 ODE-39

 Start date :
 08/09/2007

 End date :
 22/09/2007

4) WELL COST

ITEM	DESCRIPTION	TOTAL	TOTAL
''-'''	DESORII HON	AFE	Estimated
		7	
ODE	DTM	5.0 d	5.0 d
3 1/2"	Duration	13.0 d	9.8 d
	TVD	1700 m	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	Casings Tubings & down hole equipmt Drilling hits & mills	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		0	0
5.8	Deviation surveys	6	0 2
5.9	Coring services	0	0
6	Coring services Casing services	30	32
6.1	M/oll tooting	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
7.1	Electrical logging open hole	91	86
7.3	Electrical logging open note	0	
7.4	Velocity survey		0 0
7.5	Geological studies, PVT, Core Analysis (non TEP)	0 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	
8.4	Boats		<u>6</u> 3
9		0 24	
9.1	TOTAL AUSTRAL & TEP ASSISTANCE	0	0 0
9.1	Local rig supervision (drlg+Wover+geol)	16	
I	Drilling/Well assistance & studies (TEP)		0
9.3	Geological studies (TEP)	8	0
9.4	Reservoir studies (TEP)	0	0 4 50 9
	TOTAL for the projec	1600	1598



AGUADA PICHANA FIELD - Development Onshore Argentina

 Well :
 AP-237

 Rig :
 ODE-39

 Start date :
 08/09/2007

 End date :
 22/09/2007

5) BIT RECORD & BHA SUMMARY





Well Name: AP-237

Country : Argentina | Slot : Field : AGUADA PICHANA | North : Platform: N/A

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

Dr	ill String	Runs																	
									Depth		Drill	Bit		BHA	WOB	RPM		SPP	
Bit		Bit OD					TFA (incl	Depth In	Out	Drilled	Time	Drilled	Bit Hrs	ROP	(max)	(max)	Q (max)	(max)	
Ru	n Type	(in)	Make	Model	IADC Codes	SN	Noz) (in²)	(ftKB)	(ftKB)	(ft)	(hrs)	Out (ft)	Out (hrs)	(ft/hr)	(kips)	(rpm)	(gpm)	(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	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

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Bit Record

Well Name: AP-237

Country : Argentina | Slot : Field : AGUADA PICHANA | North : Platform: N/A

TOTAL

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

Dr	Orill String Runs																				
Bit R		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)	Hours on Other Well
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		

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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

Well Shape: Vert - AP-237, 9/14/... Schematic - Actual

BHA #1, 8"3/4 rotar	y drop								
Bit Type	Bit OD (in)	Len (ft)	Make		M	odel		Serial Number	
PDC	PDC 8 3/4 1.64				H		7114868		
Bit Run	IADC Codes					IADC Bit Dull O	ut		
1						1-1-ER	-N-X	-0-WT-TD	
Depth In (ftKB)	Depth Out (ftK	(B)	Depth Drilled (ft) Di			ng Time (hrs)	BH	HA ROP (ft/hr)	
0.0	1,981.6		1,981.63			18.75		105.7	
WOB (max) (kips) \	WOB (min) (kips)	RPM (m	ax) (rpm)	n) RPM (min)		Q (max) (gpm)	i	Q (min) (gpm)	
17.6	17.6	1	150	150		528		528	
BHA Objective				BHA Resul	t	•	•		
Drill to +/- 600m.				ok.					
Comment									

Drill String Components

				Mass		Drift	Gauge			Cum
Jts	Item Description	OD (in)	ID (in)	(lbs/ft)	Grade	(in)	(in)	Connections	Len (ft)	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

Branch	Туре	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

			Density	PV Calc	YP Calc			Solids	
Date	Depth (ftKB)	Mud Type	(lb/gal)	(cp)	(lbf/100f	рН	Sand	(%)	OW Ratio
9/14/2007	1.981.6	Lime mud	9.10	17.0	13.0	12.5	0.1	5.9	

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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

Well Shape: Vert - AP-237, 9/20/... Schematic - Actual

BHA #2, 6"1/8 rotary drop												
Bit Type		Bit OD	(in)	Len (ft)	Make		M	odel	Serial Number			
PDC		6 1	/8	1.31		HC-505 730276				7302760		
Bit Run	I	ADC Co	des			IADC Bit Dull Out						
2								1-1-ER	-N-X	-0-WT-TD		
Depth In (ftKB)		Depth C	Out (ftK	(B)	Depth Dril	led (ft)	Drillin	ng Time (hrs)	BH	A ROP (ft/hr)		
1,981.6			5,616.8	}	3,63	35.17		54.75		66.4		
WOB (max) (kips)	WO	B (min)	(kips)	RPM (ı	max) (rpm)	RPM (min)	(rpm)	Q (max) (gpm)		Q (min) (gpm)		
15.4		0.0			150	0		277		0		
BHA Objective						BHA Resu	lt	•				
Drill to +/- 1712m.						ok						
C						1						

Comment

Drill String Components

J				Mass		Drift	Gauge			Cum
Jts	Item Description	OD (in)	ID (in)		Grade	(in)	(in)	Connections	Len (ft)	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	Туре	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

INIGG Office	JNJ								
			Density	PV Calc	YP Calc			Solids	
Date	Depth (ftKB)	Mud Type	(lb/gal)	(cp)	(lbf/100f	рН	Sand	(%)	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	

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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			WELL:		А	P - 237		
TOTAL				P	PHASE REPORT:	8"3/4		Rig:			DE-39		
Last csg. Diametre:			Shoe:		m Phase du		ys (from	1	3-Sep-07	to)	Ī
Depth: 604 m FLUID TYPE	TVD:	604	POLYNO	Angle:	0.5	604 m ★ Csg.	diametre:	Volume d		Shoe:		m³ m	-
Depth m	110	249	470	604	☐ Completion	☐ Abandonment				Suspen	sion		
Temp. In °C Temp. out °C	20 24	24 28	25 30	24 28	Shaker screens:	140-140-110-110	mesh	Bit:			Drilling data	h	_
Mud weight in sg	1.07	1.06	1.08	1.10	Shaker screens:	140-140-110-110	mesh	PDC	Н	C 605 Z		n h	ļ
Mud Weight out sg	1.08	1.07	1.09	1.09	Shaker screens:	140 - 140	mesh	PDC				h	
Solids % Oil %	4.1	4.1	5.3	5.9			mesh mesh	Hole oper Average I			31.79	h m/h	
Water %	95.9	95.9	94.7	94.1	centrifuge	16.0	0 h	Circulatin	g		2.5	h	
O/W ratio Sand out %	0.15	0.15	0.15	0.15	3 en 1	16.0	0 h	Reaming:				h	
Sand in %	0.1	0.1	0.10	0.1			h					h	
Flow rate I/mn	2000	2000	2000	2000	LOT@ last csg shoe EMV			sg @					
Marsh Viscosity s Fann 600 rpm	62 49	55 48	57 47	58 47	Max. temperature at TD Initial hole vol. :	470 Meas	urea m³	30 °C Format. Id	2888	Calc.	4.02	°C m³	\dashv
Fann 300 rpm	31	30	30	30	initial tank vol. :		m³	Surface lo			37.00	m³	
Fann 200 rpm	23	23	22	22	Received vol. :	400.70	m³	Dumped:				m³	
Fann 100 rpm Fann 60 rpm	15	14	14	14	Made up vol. :	128.70	m³	Left behir Evaporati				m³ m³	
Fann 30 rpm					Water		m³	Abandoni	ment:			m³	
Fann 6 rpm Fann 3 rpm	4 3	4	4	3	Total handled vol. : Transferred volume (out	128.70 of rig):	m³	Total lost		m³	41.02 Dili	m³ ution Ratio I/m	
Gel 0 lbf/100 ft ²	3	3	3	3	Reusable volume (well+			87.7		m³		61	
Gel 10 lbf/100 ft ²	6	6	6	7	Products.		Cost and cor		Daire	TO:	TAL COST	1 1/0	
Gel 30 lbf/100 ft ² Ap. Visc. cP	8 24.5	8 24	9 23.5	9 23.5	Products ALDACIDE G	Amount	Unit	USD	Price 5.46	10	TAL COST	kg-l/m3	-
P.V. cP	18	18	17	17	BARACARB 25		kg	USD	0.80				
Y.P. Ibf/100 ft ² YS Ibf/100 ft ²	13	12	13	13	BARACARB 5 BARACARB 150		kg kg	USD	0.80				-
tau lbf/100 ft²					BARACOR 100		lt	USD	2.93				
n. K. lbf/s^n/100 ft²	0.66 0.51	0.68 0.44	0.65 0.53	0.65 0.53	BARA-DEFOAM W300 BARAFILM		lt It	USD	3.31 3.18				\dashv
Filtrate API 30	6.4	6	5.8	6	BARASCAV-L		lt	USD	1.61				
Filtrate 500psi 121°C cake mm					Cal BARAZAN D	3,050.00	kg	USD	0.20 13.42	us\$	610.00	23	.70
Sagging Factor					Baritina		kg kg	USD	0.390				=
WBM					BAROFIBRE		kg	USD	2.69				
pH Pm cm ³	12.5 12.3	12.5 12.0	12.5 12.1	12.5 12.0	Bentonita Carbonato de Calcio 200	8,025.00	kg kg	USD	0.12 0.12	us\$	963.00	62	.35
Pf cm ³	2.1	1.8	1.9	1.8	Cloruro de Potasio		kg	USD	0.82				
Mf cm ³ Mf/Pf	2.4 1.14	2.6 1.44	2.5 1.32	2.6 1.44	CMC Lovis N DRIL HT		kg kg	USD	4.95 3.20				-
CI - g/l	1800	1800	1800	1900	Estearato de Alumino		kg	USD	5.97				
Ca++ g/l	200	200	200	220	EZ-SPOT	070.40	lt	USD	3.94	_	0400 50		
Mg++ g/l K+ g/l					FILTER CHEK Poly Anionic Cellulose	976.10	kg kg	USD	3.20 6.92	us\$	3123.52	/	.58
NaCl g/l					Mixcel Fino		kg	USD	1.29				
CaCl2 g/l MgCl2 g/l					Mixcel Mediano BAROLUBE GOLD SEAL	624.00	kg It	USD	1.29 4.98	us\$	3107.52	4	1.85
KCI g/I					PAC-L	431.30	kg	USD	6.14	us\$	2648.18	3	3.35
CEC kg/m ³ Glycol %	42	42	42	42	PAC-R LIGNOX PLUS	22.70 418.90	kg kg	USD	6.14 2.10	us\$ us\$	139.38 879.69).18 3.25
Total CaSO4 g/l					Soda Ash	410.30	kg	USD	0.77	ασφ	073.03		.20
XS CaSO4 g/l Silicate %					Soda Caustica	150.00 1,250.00	kg	USD	1.38 0.37	us\$ us\$	207.00 462.50		.17
Silicate % NABM					Su Carb 5 Su Carb 50	1,250.00	kg kg	USD	0.37	usa	462.50	9).71
Pm cm ³					Mixcel Grueso		kg	USD	1.29				
Excess Lime g/l E.S. Volts	7.63	7.62	7.64	7.37	THERMA THIN XCD POLYMER		lt kg	USD	4.35 19.91				\dashv
CI- in mud g/l					XLR RATE	624.00	lt	USD	2.94	us\$	1834.56	4	.85
CaCl2 in WP g/l Solids													\dashv
LGS %	5.60	6.40	5.00	5.60									-
HGS %	5.00	0.40	5.00	5.00									
Solids (correct.) % OOC	5.60	6.40	5.00	5.60									-
Shaker g/kg													
HG Dryer g/kg					Total products Transporte de Material				23.80	us\$		13,975.35	_
Cutting dryer g/kg Centrifuges out					Lead engineer	8		us\$ us\$	382.50	us\$		3,060.00	\dashv
centrif 1 g/kg					Second engineer	6		us\$	348.50	us\$		2,091.00	\exists
centrif 2 g/kg centrif 3 g/kg					Costo Cementacion								-
55					Cost for phase					us\$		19,126.35	
Droblomo					COST: m³ mud	us\$ 148.61 Drille	d/m:	us\$	31.67	m³/drille	ed:	us\$ 816	
Problems					Solutions								4
_													_
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. Conditionated and run 7" casing to 607,5 m (collar: 578,41m). Halliburton Co M/U and tested lines + performed cement job OK. Nippled up and tested BOP.

Mud contractor: HALLIBURTON - BAROID Made on: 15-Sep-07 MARTINEZ Rene - MALVEZZI Matias

							MUD			WELL		Al	P - 237		
TOTAL						PHASE	REPORT:	6"1/8		Rig:		0	DE-39		
ast csg. Diam	netre:	7"		Shoe:	599.2	m	Phase duration:	7 days	(from		16-Sep-07	to	22-Sep-07)	
	1 712 m	TVD:	1712		Angle:	1.5	Metres drilled :	1113 m		Volume			21	m³	
LUID TYPE				POLYNOX	4500		End phase status:		diametre:	3"	1/2	Shoe:	1708	m	
Depth	m °C		901	1200	1566	1712	Completion	Abandonment		1		Suspensi			
Temp. In Temp. out	•C	-	30 32	30 35	32 38	30 41	Shaker screens:	215-215-215-215	mesh	Bit:		<u> </u>	rilling data		
/lud weight in			1.10	1.10	1.12	1.12	Shaker screens:	215-215-215-215	mesh	PDC		HC- 505 Z	54.25	h	
Mud Weight o	_		1.09	1.11	1.13	1.13	Shaker screens:	2 x 140	mesh	Coring:				h	
Solids	%	5.9	5.9	6.6	7	7.7			mesh	Hole ope	-			h	
Dil Mara	%	04.4	04.4	00.4	00	00.0		0.4	mesh	Average			20.51		
Nater D/W ratio	%	94.1	94.1	93.4	93	92.3	centrifuge 3 en 1	64 55	h h	Circulati Reaming	-		2.25	h h	
Sand out	%	0.15	0.15	0.15	0.15	0.15	0 ()	55		rtcanning	,.				
Sand in	%	0.1	0.1	0.1	0.1	0.1			h					h	
low rate	l/mn	1050	1050	1050	1050	1050	LOT@ last csg shoe EMW:			SG @	!		758		
Marsh Viscosi	ty s	59	54	65	55	65	Max. temperature at TD	1712 Meas		41 °C		Calc.		°C	
ann 600 rpm		49	48	52	58	56	Initial hole vol. :	07.70	m³	Format.			14	m³	
ann 300 rpm ann 200 rpm		31 22	30 21	33 24	36 26	36 24	initial tank vol. : Received vol. :	87.70	m³ m³	Surface Dumped			40.5 14	m³ m³	
ann 200 rpm		14	13	16	15	14	Made up vol. :	57.20	m³	Left beh			14	m³	
ann 60 rpm					-		1	-		Evapora	_			m³	
ann 30 rpm							Water		m³	Abando				m³	
ann 6 rpm		3	4	3	4	4 3	Total handled vol.:	144.9	m³	Total los	t vol. :	3	68.5	m³ ution Ratio I/m	
Fann 3 rpm Gel 0	lbf/100 ft ²	3	3	3	3	3	Transferred volume (out of rig): Reusable volume (well+tanks):			76.4		m³ m³	IIII	36	
Gel 10	lbf/100 ft ²	7	7	8	6	6	((Cost and c		ion				
Gel 30	lbf/100 ft ²	9	10	11	9	9	Products	Amount	Unit		t Price	TOT	AL COST	kg-I/m3	
Ap. Visc.	cP	24.5	24	26	29	28	ALDACIDE G	30.00	lt .	USD	5.46	us\$	163.80		0.2
P.V. (.P.	cP lbf/100 ft ²	18 13	18 12	19 14	22 14	20 16	BARACARB 25 BARACARB 5	1362.00 1362.00	kg kg	USD	0.80	us\$ us\$	1089.60 1089.60		9.4
rs	lbf/100 ft ²	13	12	14	14	10	BARACARB 150	1302.00	kg	USD	0.80	usψ	1009.00		3.41
au	lbf/100 ft ²						BARACOR 100		lt	USD	2.93				
١.		0.66	0.68	0.66	0.69	0.64	BARA-DEFOAM W300		lt	USD	3.31				
<u>(.</u>	lbf/s^n/100 ft2		0.44	0.55	0.49	0.68	BARAFILM	60.00	lt	USD	3.18	us\$	190.80		0.4
	API 30 500psi 121°C	4.4	4.0	3.8	4	4	BARASCAV-L Cal	208.00 2375.00	kg	USD	1.61 0.20	us\$ us\$	334.88 475.00		1.4
	cake mm						BARAZAN D	25.00	kg	USD	13.42	us\$	335.50		0.1
Sagging Facto	r						Baritina		kg	USD	0.39				
WBM							BAROFIBRE		kg	USD	2.69				
oH See	3	12.5	12.5	12.5	12.5	12.5	Bentonita	2000.00	kg	USD	0.12	us\$	240.00		13.80
om Of	cm ³	11.9 2.0	11.5 1.9	11.7 1.9	12.0 1.8	11.0 1.3	Carbonato de Calcio 200 Cloruro de Potasio	500.00	kg	USD	0.07	us\$	410.00		3.4
∕If	cm ³	2.4	2.4	2.4	2.2	1.6	CMC Lovis	000.00	kg	USD	4.95	иоф	110.00		0
Mf/Pf		1.20	1.26	1.26	1.22	1.23	N DRIL HT		kg	USD	3.20				
) -	g/l	2100	2100	2200	2500	2500	Estearato de Alumino		kg 	USD	5.97				
Ca++ //g++	g/l g/l	200	200	180	240	240	EZ-SPOT FILTER CHEK	681.00	lt kg	USD	3.94	us\$	2179.20		4.70
(+	g/l						Poly Anionic Cellulose	001.00	kg	USD	6.92	ασφ	2170.20		4.71
NaCl	g/l						Mixcel Fino		kg	USD	1.29				
CaCI2	g/l						Mixcel Mediano		kg	USD	1.29				
MgCl2 Coeficiente de	g/l	0.2	0.19	0.18	0.18	0.18	BAROLUBE GOLD SEAL PAC-L	1248.00 612.90	lt ka	USD	4.98 6.14	us\$ us\$	6215.04 3763.21		8.6° 4.2°
CEC	kg/m ³	42	42	40	43	40	PAC-R	45.40	kg kg	USD	6.14	us\$	278.76		0.3
Slycol	%						LIGNOX	144.60	kg	USD	2.10	us\$	303.66		1.0
Total CaSO4	g/l						Soda Ash		kg	USD	0.77				
(S CaSO4	g/l %						Soda Caustica	25.00	kg	USD	1.38	us\$	34.50 172.50		0.1
NABM	%						Soda Caustica Su Carb 50	125.00 1250.00	kg kg	USD	0.37	us\$ us\$	462.50		8.6
xcess Lime	g/l	7.43	7.20	7.36	7.66	7.27	Su Carb 150	1200.00	kg	USD	0.37	ασφ	402.00		0.0
.s.	Volts						Mixcel Grueso		kg	USD	1.29				
CI- in mud	g/I						THERMA THIN	18.90	lt .	USD	4.35	us\$	82.22		0.13
CaCl2 in WP	g/l		<u> </u>				XCD POLYMER	1450.00	kg I+	USD	19.91	1100	4000.04		40.00
GS GS	%	5.6	5.6	6.3	6.7	7.4	XLR RATE	1456.00	IE	USD	2.94	us\$	4280.64		10.0
igs	%	3.0	3.0	5.5	5.7										
Solids (correct		5.6	5.6	6.3	6.7	7.4									
000													_		
Shaker	g/kg						Total products							22 404 42	
HG Dryer Cutting dryer	g/kg g/kg						Total products Transporte de Material	61.67	1	us\$	23.80	us\$ us\$		22,101.40 1,467.75	
Centrifuges ou							Lead engineer	7		us\$	382.50	us\$		2,677.50	
entrif 1	g/kg	I	1				Second engineer	7		us\$	348.50	us\$		2.439.50	

Prepared new volume and aconditionated 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 reological 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%). Filtrated and Transfered brine to truck of HALLIBURTON. Reduced reological values previous to cement job. Recovered 48 m3 from cement job.

us\$

us\$ 197.97 Drilled/m:

1133.98

us\$ 26

us\$

us\$

m³/drilled:

1,133.98

28,686.14

us\$ 1358.18

Costo cementacion Completion Fluids

COST: m3 mud

Solutions

entrif 2

Problems

Comments:

g/kg

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 Chek 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.

Mud contractor: HALLIBURTON - BAROID Made on: 22-Sep-07 By: MARTINEZ Rene - MALVEZZI Matias



FINAL MUD REPORT

Field Well

Aguada Pichana AP - 237

Rig

ODE 39

		Drilling mud vo	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			AMOUNT			Unit	cos		Cost
(drilling)	Unit	Used	Damaged	Total		Price	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					USD				
BARAFILM	lt '	60.000		60.000	USD	3.31	190.80	190.80	0.50
	lt					3.18			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	000.000		000.000	USD	4.95			
N DRIL HT	_				USD	3.20			
	kg								
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			
Mixcel Fino	kg				USD	1.29			
Mixcel 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	000.000		000.000	USD	0.77	1100.00	1100.00	5.20
Soda Caustica	-	300.000		300.000	USD	1.38	414.00	414.00	1.15
Su Carb 5	kg	2500.000		2500.000	USD		925.00	925.00	
	kg	2500.000		2500.000		0.37	925.00	925.00	2.56
Su Carb 50	kg				USD	0.37			
Mixcel 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			1					
3. GRAND TOTAL (1 + 2)	0							36076.75	
4. TRANSFERRED MUD	m3	I						55075.75	
5. TRANSFERRED MUD	m3								
6. WELL COST (3-4-5)	ıns							36076.75	
` '	/m3 mud:	131.86			/m drill	ed: 21.07		/ m3 drilled:	810
UNIT COST:	/ma mud:	131.86			/III UIIII	cu. 21.07		/ ms united:	010

TECHNICAL COST		Mud engineer:	10,268.00	Mud labor	atory:	COST OF ADDITIO	NAL SERVICES
SHALES	SHAKER SCR	EENS	MU	JD CLEANER	SCREENS	Costo Cementing:	
Size	Nb	Cost	Size	Nb	Cost	Completion Fluid:	1,133.98
						MUD PLANT:	
						OTHERS: (transporte)	1,467.75
Mud contractor:	HALLIBU	RTON - BAROID		Made on:	22-Sep-07	By: Martinez, R - Ma	alvezzi M.



AGUADA PICHANA FIELD - Development Onshore Argentina

 Well :
 AP-237

 Rig :
 ODE-39

 Start date :
 08/09/2007

End date : 22/09/2007

7) CASING TALLIES



CASING TALLY

Rig: ODE-39
Well: AP-237
Field: Aguada Pichana
Date: 21-Sep-07

1,712.00 m 3 1/2 in. 1,708.10 m Stick up: 0.88 m TD: Rat hole 3.90 m Total Joints 190 1,708.98 m Casing Ø: Shoe at: Mud weight: Hook weight: 174 16 TotalLength 1.12 SG Joints to RIH 25,000 lbs Excess Joints

Torq Max 3542 Grade Weight ID Ext Vol Steel Vol. Torq Opt 3,220 ft. lbs Torq Min 2898 OD Type 9 lbs/ft 13Cr 3.500 in. 2.992 in. 6.27 l/m 1.74 l/m

<u> </u>				3.500 III.					3342 3,220 It. IDS 2090
Joint #	Type #	Order #	Joint Length (m)	Cumul. Length (m)	Distance to RT (m)	Hook Load (Lbs)	Muc	Gain m3	Remarks
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	
XN Nipple	1	18	0.32	125.2	1,582.90	28241	1	0.1	Conjunto Armado
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
									019
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	
	1	42	9.62	345.05	1,363.05	33932	3	0.5	
151							+		
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	
									Caa
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
									320
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
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

Torq Max 3542 Grade Weight ID Ext Vol Torq Opt 3,220 ft. lbs Torq Min 2898 OD Steel Vol. Type 9 lbs/ft 13Cr 3.500 in. 2.992 in. 6.27 l/m 1.74 l/m

Joint #	Type #	Order #	Joint Length	Cumul. Length	Distance to RT	Hook Load	Muc bbl	Gain m3	Remarks
			(m)	(m)	(m)	(Lbs)			
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	500
115	1	78	9.75	690.89	1,017.21	42885	7	1.1	
114	1	79	9.74	700.63	1,017.21	43137	7	1.1	
113	1	80	9.74	710.38	997.72	43390	7	1.1	
112	1	81	9.74	710.38	987.72	43642	7	1.1	
111	1	82	9.69	720.12	978.29	43893	7	1.1	
110	1	83	9.09	739.55	968.55	44145	7	1.1	
109	1	84	9.74	739.55	958.89	44395	7	1.1	
				758.88		44645	7		
108	1	85	9.67		949.22		8	1.2	
107	_	86 87	9.75	768.63	939.47	44898	8		
106	1	-	9.75	778.38	929.72	45150	<u> </u>	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	



CASING TALLY

Rig: ODE-39
Well: AP-237
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Date: 21-Sep-07

1,712.00 m 3 1/2 in. 1,708.10 m TD: Stick up: 0.88 m Rat hole 3.90 m Total Joints 190 1,708.98 m Casing Ø: Shoe at: 174 16 TotalLength Mud weight: 1.12 SG Joints to RIH Hook weight: 25,000 lbs Excess Joints

 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

Secondary Type Wind Color Cumul. Length (m) Cumul. Length (m) Lengt	
# # # Length (m)	
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 1.6 80 1 117 </th <th>S</th>	S
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	
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 1	
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	
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	
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	
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	
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79 1 118 9.75 1049.67 658.43 52173 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	



CASING TALLY

Rig: ODE-39
Well: AP-237
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1,712.00 m 3 1/2 in. 1,708.10 m Stick up: 0.88 m TD: Rat hole 3.90 m **Total Joints** 190 1,708.98 m Casing Ø: Shoe at: 1.12 SG 25,000 lbs 174 16 TotalLength Mud weight: Joints to RIH Hook weight: Excess Joints

Torq Max 3542 Grade Ext Vol Steel Vol. Torq Opt 3,220 ft. lbs Torq Min 2898 Weight OD ID Type 13Cr 9 lbs/ft 3.500 in. 2.992 in. 6.27 l/m 1.74 l/m

			•						
Joint #	Type #	Order #	Joint Length (m)	Cumul. Length (m)	Distance to RT (m)	Hook Load (Lbs)	Mud bbl	d Gain m3	Remarks
41	1	156	9.75	1419.39	288.71	61744	14	2.2	
40	1	157	9.75	1429.14	278.96	61996	14	2.3	
39	1	158	9.74	1438.88	269.22	62248	14	2.3	
38	1	159	9.75	1448.63	259.47	62501	14	2.3	
37	1	160	9.75	1458.38	249.72	62753	15	2.3	
36	1	161	9.75	1468.13	239.97	63006	15	2.3	
35	1	162	9.74	1477.87	230.23	63258	15	2.3	
34	1	163	9.74	1487.61	220.49	63510	15	2.4	
33	1	164	9.75	1497.36	210.74	63762	15	2.4	
32	1	165	9.75	1507.11	200.99	64015	15	2.4	
31	1	166	9.2	1516.31	191.79	64253	15	2.4	
30	1	167	9.74	1526.05	182.05	64505	15	2.4	
29	1	168	9.74	1535.79	172.31	64757	15	2.4	
28	1	169	9.75	1545.54	162.56	65009	15	2.5	
27	1	170	9.75	1555.29	152.81	65262	16	2.5	
26	1	171	9.74	1565.03	143.07	65514	16	2.5	
25	1	172	9.75	1574.78	133.32	65766	16	2.5	
24	1	173	9.75	1584.53	123.57	66019	16	2.5	
23	1	174	9.7	1594.23	113.87	66270	16	2.5	Romper circulacion. Tomar pesos
22	1	175	9.74	1603.97	104.13	66522	16	2.6	
21	1	176	9.74	1613.71	94.39	66774	16	2.6	
20	1	177	9.75	1623.46	84.64	67027	16	2.6	
19	1	178	9.74	1633.2	74.9	67279	16	2.6	
18	1	179	9.75	1642.95	65.15	67531	17	2.6	
17	1	180	9.74	1652.69	55.41	67783	17	2.6	
16	1	181	9.74	1662.43	45.67	68035	17	2.7	
15	1	182	9.75	1672.18	35.92	68288	17	2.7	
14	1	183	9.74	1681.92	26.18	68540	17	2.7	
13	1	184	9.74	1691.66	16.44	68792	17	2.7	
186	1	185	8.62	1700.28	7.82	69015	17	2.7	
Pup colg.	1	186	1.12	1700.26	6.7	69044	17	2.7	
THD	1	187	0.25	1701.45	6.45	69051	17	2.7	
THU	1	188	0.23	1701.69	6.41	69051	17	2.7	
Run Tool	1	189	0.66	1702.35	5.75	69069	17	2.7	
anding Jt	2	190	6.63	1708.98	-0.88	69240	17	2.7	
					Se queda	arán afuera los	caños		1,5 FF Bakerlok = 4830 ft.lbs / 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)

			20	inisert or de	lete line in tr	io two mot m			Rig:	ODE-39
			(CASING	TALLY				Well:	AP-237
TOTAL	•19								Date :	13-Sep-07
Stick up:	1.19 m	TD :	604	.00 m		Rat hole	4.2	20 m	Total Joints	46
TotalLength	600.99 m	Casing Ø:	7	in.		Mud weight:		9 SG	Joints to RIH	42
	_	Shoe at:		.80 m		look weight		00 lbs	Excess Joints	4
	Type 1	Grade N80 - SEC	Weight 23 lbs/ft	OD 7.000 in.	ID 6.366 in.	Ext Vol 25.07 l/m		el Vol. 3 l/m	Torq Min 6255	Torq Opt Torq Max 6,950 ft. lbs 7645
	2	NOO - OLO	23 103/11	7.000 III.	0.300 III.	23.07 1/111	7.0	JO 1/111	0200	0,000 11. 100 1 040
	3									
	4				T 5: /					
Joint #	Type #	Order #	Joint Length	Cumul. Length	Distance to RT	Hook Load	bbl	Gain m3		Remarks
,,,	"	"	(m)	(m)	(m)	(Lbs)	551	1110		Komurko
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		ng (3 m del Zapato)
45	11	3	14.36	29.13	570.67	21894	1	0.1		tp Rng al Centro
Float Collar	1	4	0.40	29.53	570.27	21920	1	0.1		+ Stp Rng (3 m Collar)
44 42	1	5 6	14.39 14.40	43.92 58.32	555.88 541.48	22855 23791	1 2	0.2 0.3		4 + Stp Rng 5 + Stp Rng
41	1	7	14.40	72.45	527.35	24710	2	0.3		6 + Stp Rng
40	1	8	14.25	86.70	513.10	25636	2	0.4		7 + Stp Rng
39	1	9	13.93	100.63	499.17	26541	3	0.5	C	8 + 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 35	1	12 13	13.20 14.18	142.55 156.73	457.25 443.07	29266 30188	4	0.6 0.7		9 + Stp Rng
34	1	14	14.16	171.09	428.71	31122	5	0.7		. oth mid
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	C1	0 + Stp Rng
30 29	1	18 19	13.75 13.96	227.77 241.73	372.03 358.07	34806 35714	6 7	1.0		
29	1	20	14.44	256.17	358.07	35714 36652	7	1.1 1.2		
27	1	21	14.47	270.64	329.16	37593	8	1.2	·····	1 + 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 22	1	25 26	14.45	325.33	274.47	41148 42087	9 10	1.5 1.5		2 + Stp Rng
21	1	27	14.44 14.33	339.77 354.10	260.03 245.70	42087	10	1.5		
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	C1	3 + 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 15	1	32 33	13.60 13.82	424.15 437.97	175.65 161.83	47572 48470	12 12	1.9 2.0		4 + Stp Rng
14	1	34	14.16	452.13	147.67	49391	13	2.0		T . Oth Kill
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	11	37	14.37	495.29	104.51	52196	14	2.2		C15 + Stp Rng
10 9	1	38 39	14.25 14.45	509.54 523.99	90.26 75.81	53123 54062	15 15	2.3		
8	1	40	13.81	523.99	62.00	54960	15	2.4		
7	1	41	13.83	551.63	48.17	55859	16	2.5		6 + Stp Rng
6	1	42	13.56	565.19	34.61	56740	16	2.6		
5	11	43	14.19	579.38	20.42	57662	17	2.6		
4 WHDown	1	44	13.64	593.02	6.78	58549	17	2.7		off point=C EQ m
WHDown WHUp	1	45	0.17 0.46	593.19 593.65	6.61 6.15	58560 58590	17 17	2.7 2.7		off point=6,58 m omar Pesos
L-Joint+RTool	1	46	7.34	600.99	-1.19	59067	17	2.7	10	ar 1 0003
		TBG 7"	23 #/ft N-80	SEC Torque	e(ft.lbs): M	in - 6255 / Op	ot 6950) / Max	7645	
				Total 7"	Casing 46 Tu	ihos				
					a Bajar 42 Ti					
	То	tal 7" Sobra	inte 4 Tubo		0m) - (2 x 13,		3,87m) - (43 x	10,82m)	
		1 1		i		 			ı	
		.1		L		1		L	L	



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

8) **CEMENTING REPORT**

TOTAL	TOTAL	. AUSTI	RAL	CEMENTING 3 1/2" tbg Report N° 2 DATE: 22-Sep-07			ep-07	AP-237								
Casing to be Cemer	nted	3.5	inch								Cement Jol	type		Surface casi	ng	
Casing shoe	1708	mMD		mVD	Mud type		WBM		SG	1.12		71	BHST		79	°C
Orilling Size	6 1/8	inch			LOT / FIT		-	EMW	at	-	mVD		внст		46	°C
rD	1712	mMD		mVD	Pore press.		-	EMW	at		mVD		API schedu	le	-	
Prev casing	7	inch		lbs/ft	Format. fra	С	-	EMW	at	-	mVD		-Pressure			bars
Prev csg shoe	600	mMD	600	mVD	Loborot	on, fluid	lo docia						-Temperate	ıre		°C
Dd4d.di4b				11-14		tory fluid	is desigi			1	Oham	-41-41			SLURRIES	
Products, additives	, water			Unit	n°1	n°2	n°3	SLURRIES n°1	n°2	_	Cnara	cteristics		n°1	n°2	
Cement G				MT				1	1	Specific gra	vitv		SG	1.15	1.90	
resh water				lt				1,323	381	Thickening			50 BC		3:05 hs	
Halad - 477				kg				20		Thickening			70BC	+ 4:00 hs	3:15 hs	
DAIR 3000L				l				2	2	Thickening			100BC		3:22 hs	
CFR-3L				I				4	20	Free Water			vertical			
Microblock				I					70	Free Water			45°			
HR-6L				i i					1	Fluid loss n		1000 psi	@ 45 °C	120	20	
Tuned Light				 				700		Yield	m3 slurry/te		G	2.65	0.804	
Funed Spacer				I	1000					1						
SSA 1				kg	375	1	 	İ	·	Compress 9	Strength @ 6	55 C	50 psi	7:23 hs	4:10 hs	
Halad - 567L				l I		ļ	<u> </u>	ļ	20			-	500 psi	19:12 hs	5:24 hs	
SEM-7				lt	10	10	İ	1	1	1			2654 psi	<u> </u>	24:12 hs	
Fe 2				kg	7	32				1			607 psi	24:06 hs		
Mud Flush				lt	 	1000				1						
Super Flush 101				I			1000	1		1						
Cloruro Calcio				kg		4	10			1)		
Final volume or Yie	ld			т.						<u></u>						
						Rheolog	gies (lab	oratory	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
													0	0		
Mud		1.12											14	11		
Thin Mud																
Spacer1		1.20								ļ			0	0		
Spacer2		1.02														
Lead		1.15											0		#DIV/0!	#DIV/0!
Tail		1.90								ļ			0	0	#DIV/0!	#DIV/0!
			<u> </u>		<u> </u>											
				ucts use		ost						Opera	tion sun			
Products	Unit	n°1	n°2	n°3	SLURRIES Lead	Tail	Unit price	С	ost		Operation break down		Volume m3	Flow L/mn	Press bars	Time mn
Cement G	MT		11 2	113	5.75	4.00	390.00	156	60.00		Circulation		IIIS	1050	83	
Fresh water	m3	6.96	8.64	2.4	7.60	1.306	000.00	100			Batch mixin		18.4	1000		60
Tuned Light	m3				15.90		2500.00	397	50.00	Test Lines		9			338	10
Halad-447	kg		•		125	4	25.00		5.00	Spacers			21.5	800	48	28
CFR-3L	lt				69	237	10.00	•	0.00	Lead ceme	nt		15.26	800	76	17
D-Air 3000L	lt	8	[12	18	22.00		6.00	Tail cemen			3.18	800	70	5
Microblock	lt					250	10.00	250	0.00	Displacem	ent		7.68	800	77	15
Halad-567 LXP	lt					79	45.00	•	5.00							
HR-6L	lt	<u> </u>			<u> </u>	4	16.00	•	.00	<u> </u>			<u> </u>	<u> </u>		<u> </u>
Funed Spacer	lt	8000			 		1.52	•	60.00	<u> </u>				 		
Silice	kg	2300					1.00	•	0.00				<u> </u>			
Sem 7	lt	88	86	16	ļ		20.00	•	0.00	<u> </u>				 		<u> </u>
e 2	kg	-	275	E^	 	-	7.00		25.00		Total diam'			l	7.00	
(CI	kg It			50			1.50		5.00	4	Total displac				7.60 207	-
Super Flush 101 Cloruro Calcio	lt ka			2400 100			1.20 2.00		0.00	4	Pressure tes umes exces		1		207	1
Joruro Calcio Mud Flush	kg It		8,800	100	 	 	0.18		0.00 84.00	Juilles VOI	unies exces	3 (70)	Caliper	OR/AND	Excess	
Sub-Total Servicios	ıı		5,500		l		0.10		27.00	Lead			6.20	CIGARD	10%	
Sub-Total Servicios Ac	dicionales	-			 		 		0.00	Tail			6.19		10%	
Total cost		16396.0	5229.0	3475.0	46071.5	10445.0		\$	52,540.14							
Material used	Displaceme	nt	Halliburton F		ls displacem	ent tanks.				Results			Plan.	Actual		
	Pits		Halliburton T	anks						Top Lead			449.70		mMD	
on site	Van for data	acquisition								Top Tail	n (EC)		1508.10	 	mMD mMD	
on site	internal top (FC) mMD										p (FC)			<u> </u>	IIIVID	
on site																
on site	Normal D=""	20	omments Normal Drilling.													
on site	•	π	F"		Run 30 bow centralizers 3.5"											
on site	Run 30 bow	centralizers 3		or Drop O-	hrator P' S	Dump 40 0 1:	Lof Mand Cit	h 14/2000	ei ruetu f	ecible district						
on site	Run 30 bow Test Lines. F	centralizers 3 ump 50 bbl o	f Tuned Spac				l of Mud Flus	h. W/2900 p	si, rupture fu	ssible disk ald	ne.					
on site	Run 30 bow Test Lines. F Pumping 6 b	centralizers 3 ump 50 bbl o bl Mud Flush	f Tuned Spac + 30 bbl Supe	erflush 101. D	rop bottom p	olug.		h. W/2900 p	si, rupture fu	ssible disk ald	ne.					
on site	Run 30 bow Test Lines. F Pumping 6 b Pump 100 bl	centralizers 3 rump 50 bbl o bl Mud Flush bl of 1.15 SG	f Tuned Spac + 30 bbl Supe Lead Slurry a	erflush 101. E nd 24 bbl of 1	rop bottom p	olug. ırry. Drop top	plug.				ne.					
on site	Run 30 bow Test Lines. F Pumping 6 b Pump 100 bl	centralizers 3 lump 50 bbl o bl Mud Flush bl of 1.15 SG I 1 48.3 Bbl of v	f Tuned Spac + 30 bbl Supe Lead Slurry a	erflush 101. E nd 24 bbl of 1	rop bottom p	olug.	plug.				ne.	Rig			ODE 39	

HALLIBURTON

Pedido de Equipo Nº Sales Order No

2839 5374622

PARTE DE OPERACIONES DE CEMENTACION Y BOMBEO

NEUQUEN NEUQUEN DISTRITO CMPTO AGUADA PICHANA AP-237 YACIMIENTO POZO: TOTAL AUSTRAL CLIENTE FOURPO DE **ODE 39** S. Alvarez SOLICITADO POR Jean Leminous RECIBIDO POR 20:30 hs - 21 Septiembre HORA DE LLEGADA: INICIO 10:00 hs - 22 septiembre OPERATION TIME 4:00 hs LOST TIME

22-Sep-07 PROV NEUQUEN 140 DISTANCIA Km 09:30 hs - 20 Septiembre HORA DE LLAMADA: 14:00 hs TERMINO: STAND BY

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

CEMENTACION TUBING PRODUCCION Tipo de Operación: 3000 psi 700 psi psi Tope tapón Presiones: Inicial 1120 psi Caudales: Tratamiento: 6.6 Bb/min Desplazamiento 6-4-2 Bb/min

Descripcion 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 + CICa2	5.0 Bbl	1.08 SG
Spacer 4	Agua + KCI	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 I/bol D-Air 3000L + 0.60 I/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: UNIDADES CLIENTE OPERADOR CANTIDAD HES CEMENTO "G" 447-451 ADC E. Chauquel bolsas X Tuned Light 15.9 326-449 MIXER M. Abraham m³ X Halad-447 436-77086 MIXER J. Marrero 125.0 Kg X CFR-3L M. Diaz 306.0 Litros X Cont - BM 86 BULK D-Air 3000L 435-BM88 BULK J. Espinoza 38.0 Litros X 346-FR123 CISTERNA Microblock 250.0 Litros X A. Contreras 325-TR106 CISTERNA E. Montero Halad-567 LXP 79.0 Litros x HR-6L AV1832 COMPUVAN M. Colantonio 4.0 x Litros Tuned Spacer 8000.0 Litros X Silice 2300.0 Kg X G. Paez PICK UP Sem 7 190.0 Litros X Contr Fe 2 Av 1965 PICK UP S. Alvarez 275.0 X Kg KCI 50.0 Kg X Super Flush 101 2400.0 х Litros Cloruro Calcio 100.0 Kg Mud Flush 8800.0

Registro de la Operación:

TIEMPO	DETALLE	CAUDAL BPM	PRESIONES Csg (PSI)	OBSERVACIONES
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 compañia 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	5
10:10 hs	Comienza a mezclar lechadas en Batch Mixer. Continua circulando pozo.	7 bpm	1200 psi	a a
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 pre-
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	sion de bombeo. Baja al llegar
12:40 hs	Lava Lineas c/ Agua Dulce y Salmuera. Lanza Tapon Superior .			Tpn inferior.
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	, jak		ģ.
14:00 hs	Finaliza operacion. Desmonta equipos y líneas. 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 tapón?: Accionó el collar de Retención?: Circuló durante el trabajo?: Tiempo total de mezclado:

	1050 lt/min	1200 psi
:[30	bow
Γ	si	
	Si	
Г	si	
	70 min	
г	15 min	

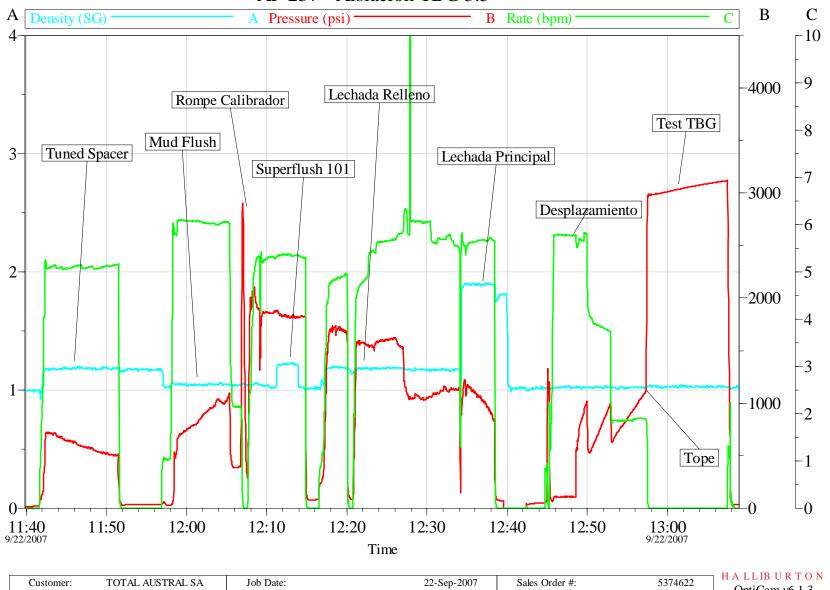
Tiempo de desplazamiento: COMENTARIOS: Tapon calibrador rompe antes, no pudiendo testear el TBG. Se testea con el tope del tapon superior. Pozo con perdidas parciales de circulación (0.5 - 1 m²/hs) durante la perforación y perfil.

POR EL CLIENTE: partopecem xls

Jean Leminous Carlos Contreras 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. C	Contreras	HASA Rep: G. Paez - S	. Alvarez

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

TOTAL	TOTAL				СЕМЕ	NTING	7" (csg	Repo	rt N° 1			09-07	F	AP-23	7
Casing to be Cemer Casing shoe Drilling Size TD Prev casing Prev csg shoe	599.70 8 3/4 604.0	7 mMD inch mMD inch mMD		mVD lbs/ft mVD	Mud type LOT / FIT Pore press. Format. frac	'	-	EMW EMW	SG at at	-	mVD mVD mVD	o type	BHST BHCT API schedu -Pressure -Temperati		not record not record - 70 15	
Products, additives	, water			Unit	SPA	ory fluid		SLURRIES)		Charac	teristics			SLURRIES	ı
Cement G Fresh water Halad - 447 Bentonita Prehidrata Cloruro de Calcio D-Air 3000L KCI				MT I kg kg kg kg	4767.00	n°2	125 4,599 125 100 8	6.85 3.054 30		Specific gra Thickening Thickening Thickening Free Water Free Water Fluid loss m Yield Compress S	Time : Time: Time: '% :		SG 50 BC 70 BC 100 BC vertical 45° @ 31 °C 50 psi 500 psi 2773 psi 233 psi	0 ND ND 1.4256 10:50 hs	1.90 4.57 hs 5.41 hs 6:19 hs - ND 144 0.7668 3.09 hs 5:00 hs 24:07 hs	
i iliai volulle or Tie	iu			<u> </u>		Rheolog	gies (lab	oratory /	on site)					<u> </u>	
FLUIDS Mud Spacer1 Spacer2 Lead Tail Mud Thin Mud Spacer1 Spacer2 Lead Tail Products Cement G Fresh water Bentonita Cloruro de Calcio D-Air 3000L Halad - 447	24 24 24 50 Unit MT m³ kg kg it kg	1.50 1.90 1.08 SPAi n°1	F300 53 74 Prod CERS n°2	## ## ## ## ## ## ## ## ## ## ## ## ##	## 100 34 40 40 40 40 40 40	29 36 STOP JOB TOP JOB	F30 21 29 Unit price 390.00 0.50 2.00 22.00	432! 0.1	00 0.00 3.00				28.5 51 13 24.77 6.04 5.24 12.04	24.5 23 17 17 17 18 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10	Press bars 29.38 336 22 21 23 79	3.86 4.50 Time mn 2:00 hs
Material used	Fabrication Silos Displacemer Pits	nt t	Bulk Transp	2275.5 Batch Mixer, 1 ort, 660 cuft.			8648.00		8.00 00 13,674.68	ı	otal displac Pressure tesi Imes excess	t	Caliper Plan. 0.00 300.00	OR/AND Actual	11.88 0 Excess 40% 10%	1
Comments	Pump 30 bbl Pump 38 bbl Pump 33 bbl Desplace with Cement to su	centralizers 7 of water and 1.5 SG lead 1.9 SG tail sl h 75.75 bbl of	drop bottom slurry. lurry. Drop top f water. Final	plug. p plug. pressure: 112	25 psi, bump	plug: 2940 p				r + 10% Exce	SS.	Rig Cement Co			ODE 39 Halliburton	

LJ /		91 I		
	~_		ı	1

 Pedido de Equipo №
 2796

 Sales Order №
 5361012

PARTE DE OPERACIONES DE CEMENTACION Y BOMBEO			
DADTE DE ODEDACIONES DE CEMENTACION V DOMBEO			
	DARTE DE OREDAGIONES DE SEMENTAGION VIDON		
PARTE DE OPERALIONES DE LEMENTALION Y BOMBEO	PARTE DE OPERACIONES DE CEMENTACION Y BON	IKF()	

DISTRITO:	NEUQUEN		CMPTO:	NEL	JQUEN			FECHA:	15-Sep-2007		
YACIMIENTO:	AGUADA PICHANA		POZO:		P-237		-	PROV.:	NEUQUEN		
			ii .		DE 39		-				
CLIENTE:	TOTAL		EQUIPO DE:				-	DISTANCIA:		Km	
SOLICITADO POR:	Jean Le minous		RECIBIDO POR:	Sergio	Alvarez		-	HORA DE LLAMADA:	09:00 hs - 14 Sep	ot	
HORA DE LLEGADA:	20:15		INICIO:					TERMINO:			
OPERATION TIME:			LOST TIME:				-	STAND BY:			
5 / 115			1				•				
Datos del Pozo:					Datos de	e la Tuberia					
Prof. Final:	604.00	Tope:	Sur	perficie		Diámetro y Tipo:	7" N		Peso Casing:	23.00	
Diámetro Promedio:	8 ¾	Den. Lodo:	1.0)8 SG		Prof. del Zapato:	599.7	0 mts	Profundidad DV:		
Reología Lodo:	13	VP PF		17		Prof. del Collar:	570.1	7 mts	Tipo Liner:		
Tipo de Lodo:	POLYNOX	Tubing :				Prof. Aro de Tope:			Diametro Liner:		
Prof. de Barras:	10211107	Punzados:				Prof. Hta			Profundidad Liner:		
FIOI. UE Dallas.		FullZauos.				F101. 171.a			FIOIUIIUIUAU LIIIEI.		
				1							
Tipo de Operación			CEMEI			ERIA SUPERFI	ICIE 7'		_		
Presiones:	Inicial: 320	psi	Final:	1125	psi		Tope tapón:	2940	psi		
Caudales:	Tratamiento: 1203	Its/min			•		Desplazamiento:	7-6-5-2	Bb/min		
		-									
Descripcion del bo	mbeo:								Volúmenes	Densidades	
Spacer 1	Agua								30.0 bbl	1.00 SG	
	Agua								30.0 001	1.00 30	
Spacer 2											
Spacer 3											
Spacer 4											
Spacer 5											
Lead Slurry	Cemento "G" + 3.00%	Bentonita Pre	eh.+ 2.50% Clo	ruro de	Calcio + 0	0.10 I/bol D-Air 30	00L	······	38.0 bbl	1.50 SG	
Tail Slurry	Cemento "G" + 0.40%								33.0 bbl	1.90 SG	
		Tididd TTT	0.10 // 001 15 / 111						75.8 bbl	1.00 SG	
Displacement	Agua								73.0 001	1.00 3G	
Materiales:						Elementos de E	ntubacion:	Equipos:			
TIPO		CANTIDAD	UNIDADES	HES	CLIENTE	TIPO	CANT.	TIPO		OPERADOR	
CEMENTO "G"		222	bolsas	Х				ADC	447-451	E. Cheuguel	
Cloruro de Calcio		100	kg	х				MIXER	436-CM449	J. Marrero	
D-Air 3000L		19	Its	Х				BULK	359-BM86	J. Espinoza	
Bentonita Prehidrata	ıda	150	kg		X			COMPUVAN	1832	Montero	
Halad - 447		30	kg	Х						N. Garrido	
								PICK UP	AV 1964	R. Villalva	
								PICK UP	AV 1952	J. Ogando	
								FICKOF	AV 1952	J. Oganuo	
Registro de la Ope	roolóni	1			1	l.	L	1	l l		
Registro de la Ope	acion.						CAUDAL	PRESIONES	OBSERVACIONES		
TIEMPO	DETALLE						BPM	Csg (PSI)	OBSERVACIONES	•	
00.45							DEIVI	Csy (F3I)			
20:15	Llega a locacion										
22:00	Arma equipos y líneas	. Prepara agua	a de mezcla								
5:50 AM - 15/09/07	Finaliza entubación. M	onta cabeza,	conecta linea d	le lodo.	Cía ODE	circula pozo.	8 bpm	420 psi	Circula normal		
7:15	Realiza reunion de seg							4800 psi			
7:40	Comienza a mezclar le				1000 por p	or 10 mm (orc)		1000 poi			
7.40			iliua Circulariuc				0 1	000:		***************************************	
	Bombea 30 bbl de agu						6 bpm	320 psi		***************************************	
8:58	Lanza Tapon Inferior +	bombea 38 b	bl lechada 1.5	s.g			6 bpm	300 psi			
								325 psi			
9:12	Lanza tapon sup. Desplaza con 75.75 bbl de agua. 7-6-5-2 1125 psi									desde los 62 bbl	
9:28	Tope tapon incrementa presion a 2940 psi. Chequea csg 10 min OK									to.	
9:40	Se desfoga y retorna 0.75 bbl. Cierran elementos de flotacion ok								de desplazamien Ecualiza a los 32	***************************************	
	Se destoga y retorna u.75 bbi. Cierran elementos de flotación of Finaliza operación. Desmonta líneas y equipos.								Loudiiza a 103 02	bbi de despiaz.	
10:00	г папzа орегасіоп. De	anionia imeas	y equipos.								
				***************************************					ļ		
							+	ļ.	1		
DATOS ADICIONAL	LES SOBRE LA OPER	ACION:				•					
Tiempo de circulació	in antes de Cementar:			2:0	00 hs	Caudal y presión	de Circulación:		8	420 psi	
Tiempo sin circular p	revio a Cementar				-		tralizadores y tipo:		15	bow	
	circulación previa y dur	ante el trabaio	1		no	Hizo tope tapón?	, ,		si		
	lo arroiado antes o des				enuee	Accionó el collar			oi ei		

Se usó Batch Mixer?:

COMENTARIOS:

Circuló(normal, parcial o no) previo a la Cementación?

Jean Leminous Carlos Contreras

normal

POR HALLIBURTON ARGENTINA: FO-ARG-HES-CEM-010-Rev. D 28/09/2004

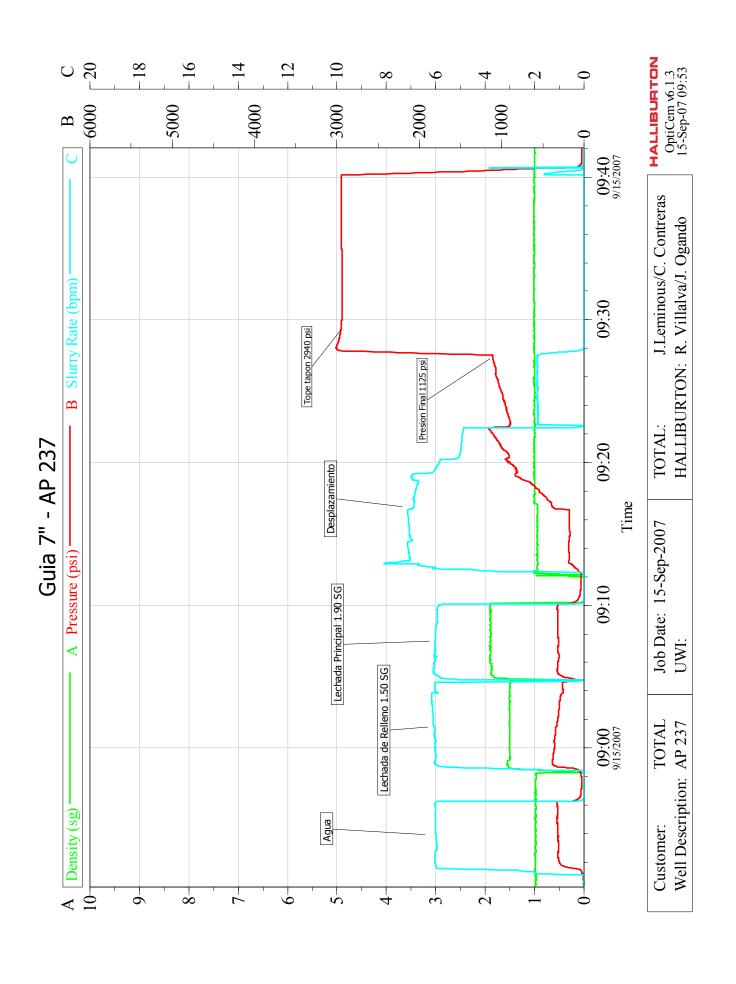
Circuló durante el trabajo?:

Tiempo total de mezclado: Tiempo de desplazamiento:

> Reynaldo Villalva Juan Jose Ogando

si

16 min.





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

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

Severity

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

Comment

CTOE	^o Cards	O I-	:44
S I () F	, Larne	SIID	mitten

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



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

10) DAILY DRILLING REPORT

	TOTAL Austral	Dai	ly Drillin	ıg R	eport				Well Na	ıme: AF	2-237						
Тота			Rig :OE BOP Test Type BOP's Test		, ENSIGN		Next Da	te	Days w/o Stop Cards Parent Comp	LTA: 220	Da Dri	DVING, N aily progre illing Hou dnight de	ırs		,	Date Report numbe Water Depth Activity Type 8	
Daily Sur Rig mov	mmary : re from AP 236 to AP 237 (10 Km)		Survey Da	nta VD (ftKB)) Incl (°) Azı		Branch	•	Safety Inci		Ca		Strings Set Depth (ftKB)	Top De (ftKE	3,851.7	Depth (TVD) (ftKB) 3,850.6 Avi	
6:00 am Wait on o						Ex	xpected 5,594		Date	Туре		Next: 7"	at 600m.	5	5,242.8 5,301.8 5,508.5	5,300.6 Mic	dle Mulichinco ver Mulichinco
Time								-	Remarks						NA	J	
Start Time 05:00	Dur (hrs) 15.00 Rig move from AP 236 to AP 237.	Comment				C	Code	Cum Dur (hrs)	from 00h00 to 06h0 Rig move equipmer 1 Forklift.		y light.				OW R.	ype Density (Solids Sand	I LGS (%) H
20:00	Rig down 20% - Rig move 10% - Rig up 0%. 4.00 Wait on day light.					DAY		19.00	1 Crane 20T 4 semi. 4 low bed. 2 gin pole							(cp) YP OR (I e (mL/30 HTHF	`
															Comm	dd (bbl) Vol Los	Final V
										aily Cost :			Co	Costs ost (Loc) Field (Loc)		ety stocks Stock Des Unit	Consu
Para	meters TFA (incl			Int Depth	Drill Time	Int ROP	Cum Der	oth Cur	n Drill Time		Flow Rate	e RPM		Off Btm Tq	PU Str	SO Str FRW	Bit Dull Bit Dull
BHA No.	Bit Run Noz) (in²) Bit and Core Head Inventory	Туре	Start (ftKB)	(ft)	(hrs)	(ft/hr)	(ft)	Jul Oui		SPP (psi			(ft-lbs)	(ft-lbs)	Wt (kips) V	Vt (kips) (kips)	

Roll (°)

Pitch (°) Heave (ft) T (low) (°F)

Cumul POB :34

Daily Drilling Report TOTAL Austral Well Name: AP-237 Rig: ODE-39, ENSIGN Days w/o LTA: 221 MOVING. MOVING Date Field: AGUADA PICHANA Report number Stop Cards **BOP Test** Daily progress Platform: N/A Water Depth Next Date Parent Company Quantity Last Date Drilling Hours Activity Type & N° BOP's Test Midnight depth Daily Summary : WellBore **Casing Strings** Survey Data **Formations** Rig move from AP 236 to AP 237 (10 Km) MD (ftKB) TVD (ftKB) Incl (°) Azm (Branch Main Nom Top Depth Top Depth (TVD) AP-237 OD (in) (ftKB) (ftKB) (ftKB) **Safety Incidents** 3,851.7 3,850.6 Avile Type 5,242.8 5,241.5 Upper Mulichinco 6:00 am Status : Expected TD 5.300.6 Middle Mulichinco 5,301.8 Wait on day light. 5.594 5.508.5 5.507.2 Lower Mulichinco Planned Operation : Rig move from AP 236 to AP 237. Next: 7" at 600m. Remarks Time Log Mud from 00h00 to 06h00 : Wait on day light. Cum Mud Type Density (... ECD (lb/... Mud Vol ... Dur Start Dur Time (hrs) (hrs) Code Comment OW R... Solids... Sand Mast lowered at 11:00 8.00 00:00 8.00 Wait on day light. DAY PV OR (cp) YP OR (I... YS Calc (... Marsh vi... 08:00 12.00 Rig move from AP 236 to AP 237. ASSY 20.00 Rig move equipment: Rig down 70% - Rig move 50% - Rig up 30%. Filtrate (mL/30... | HTHP Filt (mL/3... | Oil Cutti... 1 Forklift. 20:00 4.00 Wait on day light. DAY 1 Crane 20T Mf (mL) Pf (mL) 4 semi. 4 low bed Gel 0 (lbf... Gel 10 (l... Ca (mg/L) 2 gin pole Comment Vol Add (bbl) Vol Lost (bbl) Safety stocks Main Stock Des **Mud Costs** Daily Cost: 3,050 Cost Cost (Loc) Cumulative Cost: 248,464 (USD) Cum Field (Loc) **Parameters** Depth TFA (incl Drill Time Int ROP Cum Depth Cum Drill Time Flow Rate RPM Drill Ta Off Btm Ta PU Str SO Str (ft) Noz) (in²) (ft/hr) (ft-lbs) (ft-lbs) Wt (kips) Wt (kips) (kips) BHA No. Bit Run (hrs) (ft) (hrs) SPP (psi) (gpm) (rpm) Bit and Core Head Inventory Type Start (ftKB) WOB (kips)

9/9/2007

2

DEV 1

Formation Name

LGS (%) HGS (%)

Chlor (m...

Final Volume (bbl)

Consu...

Bit Dull Bit Dull

26

Pm (mL)

Date Туре **Drill String Runs** Weather Conditions Support Vessels\H... POB Wave Per (s) Wave Dir (°) Wave Ht (ft) BHA No. BHA Vessel Name Count Туре Drlg Contractor Wind Spd (kn... Wind Dir (°) Visibility (km) Operator - D&C Service Cies Supervisor Current Spee... Current Dir (°) Max Var Load.. Alex Baudry Roll (°) Pitch (°) Heave (ft) T (low) (°F) Cumul POB:34

Daily Drilling Report TOTAL Austral Well Name: AP-237 Rig: ODE-39, ENSIGN Days w/o LTA: 222 MOVING. MOVING Date Field: AGUADA PICHANA Report number Stop Cards **BOP Test** Daily progress Platform: N/A Water Depth Next Date Parent Company Quantity Last Date Drilling Hours Activity Type & N° BOP's Test Midnight depth Daily Summary : WellBore Casing Strings Survey Data **Formations** Rig move from AP 236 to AP 237. MD (ftKB) TVD (ftKB) Incl (°) Azm (° Branch Main Nom Top Depth Top Depth (TVD) AP-237 OD (in) (ftKB) (ftKB) (ftKB) Safety Incidents 3,851.7 3,850.6 Avile Type 5,242.8 5,241.5 Upper Mulichinco 6:00 am Status : Expected TD 5,300.6 Middle Mulichinco 5,301.8 Wait on day light. 5.594 5.508.5 5.507.2 Lower Mulichinco Planned Operation : Rig move from AP 236 to AP 237. Next: 7" at 600m. Time Log Remarks Mud from 00h00 to 06h00 : Wait on day light. Cum Mud Type Density (... ECD (lb/... Mud Vol ... Dur Start Dur Time (hrs) (hrs) Code Comment OW R... Solids... Sand 8.00 00:00 8.00 Wait on day light. DAY Rig move equipment: PV OR (cp) YP OR (I... YS Calc (... Marsh vi... 08:00 12.00 Rig move from AP 236 to AP 237. **ASSY** 20.00 1 Forklift Rig down 100% - Rig move 100% - Rig up 60%. 1 Crane 20T Filtrate (mL/30... | HTHP Filt (mL/3... | Oil Cutti... 8 semi. 20:00 4.00 Wait on day light. DAY 4 low bed. Mf (mL) Pf (mL) 2 gin pole Gel 0 (lbf... Gel 10 (l... Ca (mg/L) Chlor (m... Comment Vol Lost (bbl) Vol Add (bbl) Safety stocks Main Stock Des **Mud Costs** Daily Cost: 3,050 Cost Cost (Loc) Cumulative Cost: 251,514 (USD) Cum Field (Loc) **Parameters** Depth TFA (incl Drill Time Int ROP Cum Depth Cum Drill Time Flow Rate RPM Drill Ta Off Btm Ta PU Str SO Str (ft) Noz) (in²) Bit and Core Head Inventory (ft/hr) (ft-lbs) (ft-lbs) Wt (kips) Wt (kips) (kips) BHA No. Bit Run (hrs) (ft) (hrs) SPP (psi) (gpm) (rpm) Туре Start (ftKB) WOB (kips)

9/10/2007

3

DEV 1

Formation Name

LGS (%) HGS (%)

Final Volume (bbl)

Consu...

Bit Dull Bit Dull

Pm (mL)

Drill String Runs	Date Type	Weather Conditions	Support Vessels\H	POB
BHA No. BHA		Wave Dir (°) Wave Per (s) Wave Ht (ft)	Vessel Name Type	Type Co
				Drlg Contractor
		Wind Spd (kn Wind Dir (°) Visibility (km)		Operator - D&C
	Supervisor			Service Cies
		Current Spee Current Dir (°) Max Var Load		'
	Alex Baudry			
		Roll (°) Pitch (°) Heave (ft) T (low) (°F)		
				Cumul POB :34

Daily Drilling Report TOTAL Austral Well Name: AP-237 Rig: ODE-39, ENSIGN Days w/o LTA: 223 MOVING. MOVING Date Field: AGUADA PICHANA Report number Stop Cards **BOP Test** Daily progress Platform: N/A Water Depth Next Date Parent Company Quantity Last Date Drilling Hours Activity Type & N° BOP's Test Others Midnight depth Others Daily Summary : WellBore **Casing Strings Survey Data Formations** Rig up on location. Raise mast and condition rig. MD (ftKB) TVD (ftKB) Incl (°) Azm (Branch Main Nom Top Depth Top Depth (TVD) AP-237 OD (in) (ftKB) (ftKB) (ftKB) **Safety Incidents** 3,851.7 3,850.6 Avile Type 5,242.8 5,241.5 Upper Mulichinco 6:00 am Status : Expected TD 5.300.6 Middle Mulichinco 5,301.8 Condition rig. 5.594 5.508.5 5.507.2 Lower Mulichinco Planned Operation : Next: 7" at 600m. Complete to condition rig - Spud the well Remarks Time Log Mud From 00h00 to 06h00 Cum Mud Type Density (... ECD (lb/... Mud Vol ... Dur Start Dur 00h00 to 06h00 : Condition rig. Time (hrs) (hrs) Code Comment OW R... Solids... Sand 00:00 8.00 Wait on day light. DAY 8.00 Mast raised at 18h30. PV OR (cp) YP OR (I... YS Calc (... Marsh vi... 08:00 10.50 Rig move from AP-236 completed. Continue with Rig up. ASSY 18.50 Drawworks raised at 19h15. 18:30 5.50 Condition the rig and prepare to spud. ASSY 24.00 Filtrate (mL/30... | HTHP Filt (mL/3... | Oil Cutti... Mf (mL) Pf (mL) Gel 0 (lbf... Gel 10 (l... Ca (mg/L) Chlor (m... Comment Vol Add (bbl) Vol Lost (bbl) Safety stocks Main Stock Des **Mud Costs** Daily Cost: 3,050 Cost Cost (Loc) Cumulative Cost: 254,564 (USD) Cum Field (Loc) **Parameters** Depth TFA (incl Drill Time Int ROP Cum Depth Cum Drill Time Flow Rate RPM Drill Ta Off Btm Ta PU Str SO Str (ft) Noz) (in²) (ft/hr) (ft-lbs) (ft-lbs) Wt (kips) Wt (kips) (kips) BHA No. Bit Run (hrs) (ft) (hrs) SPP (psi) (gpm) (rpm) Bit and Core Head Inventory Type Start (ftKB) WOB (kips)

Date

Alex Baudry

Drill String Runs

BHA

BHA No.

Туре

Supervisor

Weather Conditions

Pitch (°)

Wind Spd (kn... Wind Dir (°)

Wave Dir (°)

Roll (°)

Wave Per (s)

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

Wave Ht (ft)

Heave (ft) T (low) (°F)

Visibility (km)

9/11/2007

4

DEV 1

Formation Name

LGS (%) HGS (%)

Final Volume (bbl)

Consu...

Bit Dull Bit Dull

POB

Туре Drlg Contractor

Operator - D&C Service Cies

Cumul POB:33

Count

26

Support Vessels\H...

Vessel Name

Pm (mL)

	Da	ily Drilling Report						
9	TOTAL Austral			Well Name: AF	-237			
TOTAL	Field :AGUADA PICHANA	Rig :ODE-39, ENSIGN		Days w/o LTA: 224	MOVING, MOVING	ì	Date	9/12/2007
	Platform :N/A	BOP Test Type Last Date	Next Date	Stop Cards Parent Company Qua	Daily progress Drilling Hours		Water Depth Activity Type	
		BOP's Test			Midnight depth		Touvity Type	DEV I
Daily Summary Condition rig p	/ : prior to spud AP-237.	Survey Data	WellBore Branch		Casing String	s Format		
		MD (ftKB) TVD (ftKB) Incl (°) Azm (°	AP-237	Safety Incidents	Main Nom Set Dep OD (in) (ftKB)	(ftKB)	(ftKB)	Formation Name
6:00 am Status	::		Expected TD	Date Type		5,2		ne oper Mulichinco ddle Mulichinco
Condition rig. Planned Operat	tion:	_	5,594					wer Mulichinco
Drill 8"3/4 phase	e to +/-600m.			Domorko	Next : 7" at 600m.			
Time Log			Cum	Remarks From 00h00 to 06h00 :			Mud Mud Type Density (ECD (lb/ Mud Vol
Start Dur Time (hrs)	Comment		Code Dur (hrs)	00h00 to 06h00 - Drill auxiliary well Spud the well at 06h00.	ls. Pressure test 4" & 2" lines to 4	000psi.	OW R Solids San	d LGS (%) HGS (%
00:00 24.0	Condition rig prior to spud the well in progressR1.		ASSY 24.00				PV OR (cp) YP OR (I	YS Calc (Marsh vi.
				R1: - Test emergency shut down			Filtrate (mL/30 HTH	P Filt (mL/3 Oil Cutti
				- Mix 42 m3 spud mud Weld conductor pipe test fire fighting equipments.			Mf (mL) Pf (mL)	Pm (mL) pH
				- M/U kelly.			Gel 0 (lbf Gel 10 (l	Ca (mg/L) Chlor (m.
							Comment	
								Final Volume
							Vol Add (bbl) Vol Lo	st (bbl) (bbl)
							Safety stocks	
					NA	d Costs	Main Stock Des Uni Baryte kg	0.0 16
				Cost Daily Cost :		Cost (Loc)	Drilling Water m³ Diesel L	0.0 136 1,800.0 7,720
				(USD) Cumulative		m Field (Loc)		
Paramete	ers							Bit Dull
- uramote	TFA (incl	Int Depth Drill Time In	t ROP Cum Depth Cu	ım Drill Time	Flow Rate RPM Drill Tq	Off Rtm Ta	PU Str SO Str FRW	Bit Dull
BHA No. Bit Ru	un Noz) (in²) Bit and Core Head Inventory Type		(ft/hr) (ft)	(hrs) WOB (kips) SPP (psi		(ft-lbs) W	/t (kips) Wt (kips) (kips)	
Drill Strin	ng Runs		Date	Type Weather Wave Dir (°)	Conditions Wave Per (s) Wave Ht (ft)	Supp	ort Vessels\H	
BHA No.	ВНА			Wind Spd (kn.	.,	Vessel N	lame Type	Type Cour Drlg Contractor
			Super		Wind Dir (°) Visibility (kn	·		Operator - D&C Service Cies
			JC LEMINOUS	Current Spee.	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
				Roll (°)	tch (°) Heave (ft) T (low) (F)		Cumul POR :39

TOTAL Austral

Field: AGUADA PICHANA Platform: N/A

Rig: ODE-39, ENSIGN

BOP Test		
Туре	Last Date	Next Date
OP's Test		

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

WellBore Survey Data Branch MD (ftKB) TVD (ftKB) Incl (°) Azm (°) 308.40 308.38 AP-237 1.00 816.93 816.87 0.50

6:00 am Status : Drilling @548m. Planned Operation :

Drill to 604m. Perform wiper trip to surface, RIH 7"csg.

	Expected TD
	5,594

Time Log

Start	Dur			Cum Dur
Time	(hrs)	Comment	Code	(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 blockR1.	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

Well Name: AP-237

Days w/o LTA: 225 Stop Cards Parent Company Quantity Total

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

8"3/4, DRILLING

Date 9/13/2007 Report number 6 Water Depth Activity Type & N° DEV 1

Safety Incidents Type

	Casing	Strings	Formation	าร	
	Main Nom	Set Depth	Top Depth	Top Depth (TVD)	
┪	OD (in)	(ftKB)	(ftKB)	(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
1			5,508.5	5,507.2	Lower Mulichinco
	Next: 7"	at 600m.	1		

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.

change out bolts lateral protection carter.

Mud Type	•	Densit	у (ECD	(lb/	М	ud Vol
Lime mud		8.8	5	9	9.18		
OW R	S	olids	Sand	t	LGS (%	6)	HGS (%)
		4.1	1.1 0.		6.3		
PV OR (c	p)	YP OR	(l	YS C	alc (M	arsh vi
18.0		12.	2.0 2.0		55.00		
Filtrate (n	nL	/30	HTHP Filt (mL/3		. 0	Oil Cutti	
6.0	0						
Mf (mL)		Pf (mL	.)	Pm ((mL)	рl	1
2.60		1.8	0	1:	2.00		12.5
Gel 0 (lbf.		Gel 10	(l	Ca (mg/L)	С	hlor (m
3		6		2	200		1,800
Comment	t						

(bbl) Vol Add (bbl) Vol Lost (bbl) 647.2 580.5

Final Volume

Cost (USD) Daily Cost : 51,171 Cumulative Cost: 310,785 **Mud Costs** Cost (Loc)

14,721 Cum Field (Loc)

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 Bit Dull Bit Dull Depth TFA (incl Drill Time Int ROP Cum Depth Cum Drill Time Flow Rate RPM Drill Ta Off Btm Ta PU Str SO Str (ft) Noz) (in²) Bit and Core Head Inventory (ft/hr) WOB (kips) SPP (psi) (rpm) (ft-lbs) (ft-lbs) Wt (kips) Wt (kips) (kips) BHA No. Bit Run (hrs) (hrs) (gpm) Start (ftKB) (ft) 0.65 8 3/4in, HC-605-Z, 7114868 Drill Formation 0.0 1,017.06 12.00 68.3 63.9 1 1 12.00 84.8 1,017.06 17.6 2,175.6 528 150 66.1

Drill Strin	ng Runs
BHA No.	ВНА
	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	Туре				
		9/13/2007	Pre Spud Meeting				
II							
	П		Supervisor				
		JC LEMINOUS					
		OO ELIMINOO	.5				
_		1 490 17					

Weathe	er (Cond	itions	•	
Wave Dir (°)		Wave Per (s)		Wave Ht (ft)	
Wind Spd (kn		Wind Dir (°)		Visibility (km)	
Current Spee		Current Dir (°)		Max Var Load	
Roll (°)	Pitc	h (°)	Heave (ft)	T (low) (°F)

Support \	Vessels\H	POB	
Vessel Name	Туре	Туре	Count
		Drlg Contractor	23
		Operator - D&C	5
		Service Cies	9
		Cumul POB :3	37

TOTAL Austral

Field: AGUADA PICHANA Platform :N/A

Rig: ODE-39, ENSIGN

BOP Test Last Date Next Date BOP's Test

Daily Summary : Drill from 310m to 604m. Perform wiper trip to surface. Circualte hole clean on	Survey	Data			WellBore
bottom. POOH & L/D 6"1/2 BHA. RIH 7" csg in progress @42m.	MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	Branch
	1,312.34	1,312.26	0.50	. ,	AP-237
	1 701 50	1 701 10	0.50		

1,781.50 1,781.40 1,970.14 1,970.02 1.50 6:00 am Status : Expected TD 1,971.78 1,971.66 0.50 Install base plate & lateral valve. 5,594

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

Time L	.og
--------	-----

Start	Dur			Cum Dur
Time	(hrs)	Comment	Code	(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

Well Name: AP-237

Days w/o LTA: 226								
Stop Cards								
Parent Company	Quantity							
Others	1							
Total	1							

8"3/4, CASING & CEMENT							
Daily progress	964.57						
Drilling Hours	6.75						
Midnight depth	1,981.6						

9/14/2007
7
DEV 1

Safety Incidents								
Date	Туре							

	Casing		Formation		
۱	Main Nom	Set Depth	Top Depth	Top Depth (TVD)	
┪	OD (in)	(ftKB)	(ftKB)	(ftKB)	Formation Name
			3,851.7	3,850.6	Avile
1			5,242.8	5,241.5	Upper Mulichinco
٦			5,301.8	5,300.6	Middle Mulichinco
			5,508.5	5,507.2	Lower Mulichinco
۱	Novt · 7"	at 600m	1		

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.

Mud							
Mud Type	Densit	у (ECD	(lb/	M	ud Vol	
Lime mud	9.1	0	9.43				
OW R	Solids	San	d LGS (%		6) HGS (%		
	5.9	0	.1	5.6			
PV OR (c) YP OR	(I	YS C	Calc (M	arsh vi	
17.0	13.	0		2.0		58.00	
Filtrate (m	ıL/30	HTH	Filt	(mL/3	. 0	Dil Cutti	
5.8	3						
Mf (mL)	Pf (mL	.)	Pm ((mL)	рl	Н	
2.60	1.8	0	1:	2.00	12.5		
Gel 0 (lbf.	Gel 10	(l	Ca (mg/L)		С	hlor (m	
3		2	220		1,900		
Comment							

		Final Volume
Vol Add (bbl)	Vol Lost (bbl)	(bbl)
162.3	158.5	584

Cost (USD)

Daily Cost : 46,926 Cumulative Cost: 357,711 **Mud Costs** Cost (Loc) 6,326

Cum Field (Loc)

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

Drill String Pune

Parameters											Bit Dull										
							Int														Bit Dull
			TFA (incl				Depth	Drill Time		Cum Depth	Cum Drill Time			Flow Rate	RPM	Drill Tq	Off Btm Tq		SO Str		1-1-ER-N-X-0-WT-TD
	BHA No.	Bit Run	Noz) (in²)	Bit and Core Head Inventory	Туре	Start (ftKB)	(ft)	(hrs)	(ft/hr)	(ft)	(hrs)	WOB (kips)	SPP (psi)	(gpm)	(rpm)	(ft-lbs)	(ft-lbs)	Wt (kips)	Wt (kips)	(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	
															•				•		1

ш	71111 Still	ig ixuiis
	BHA No.	ВНА
		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	l ype
_	9/13/2007	Pre Spud Meeting
	9/14/2007	Pre-Job Meeting
'		
_		
		Supervisor
	JC LEMINOL	
	JC LEMINOU	

Weather Conditions										
Wave Dir (°)		Wave Po	er (s)	Wave Ht (ft)						
Wind Spd (k	Wind Di	r (°)	Visibility (km)							
Current Spe	Current	Dir (°)	Max Var Load							
Roll (°)	Pitc	h (°)	Heave ((ft) T (low) (°F)						

Support \	/essels\H	POB	
Vessel Name	Туре	Type	Count
		Drlg Contractor	23
		Operator - D&C	4
		Service Cies	26
		Cumul POB :	53

TOTAL Austral

Field :AGUADA PICHANA Platform :N/A Rig: ODE-39, ENSIGN

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

Time Log

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

Start	Dur			Cum Dur
Time	(hrs)	Comment	Code	(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 equipmentsR1.	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.	BOPTEST	24.00

Well Name: AP-237

Days w/o LTA: 227

Stop Cards
Parent Company Quantity
Total 1

8"3/4, CASING & CEMENT

Daily progress 0.00

Drilling Hours

Midnight depth 1.981.6

Date 9/15/2007
Report number 8
Water Depth
Activity Type & N° DEV 1

Safety Incidents

Date Type

Casing Strings		Formation	าร	
Main Nom	Set Depth	Top Depth	Top Depth (TVD)	
OD (in)	(ftKB)	(ftKB)	(ftKB)	Formation Name
7	1,968.5	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.			

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

Mud							
Mud Type		Density (ECD (lb/		Mud Vol	
OW R	S	olids	San	d	LGS (%	6)	HGS (%)
PV OR (c	p)	YP OF	R (I	YS (alc (M	arsh vi
Filtrate (n	Filtrate (mL/30 HTHP Filt (mL/3 Oil Cutti					Oil Cutti	
Mf (mL)		Pf (mL	-)	Pm	(mL)	pl	1
Gel 0 (lbf		Gel 10	(l	Ca (mg/L)	С	hlor (m
Comment							

Vol Lost (bbl)

Final Volume

(bbl)

551.5

Cost (USD)

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

Mud Costs

Cost (Loc)
1,0
Cum Field (Loc)

| Safety stocks | | Main Stock Des | Unit | Consu... | Stock | Baryte | kg | 0.0 | 16.0 | Dicisel | L | 2,380.0 | 13,380.0 |

Vol Add (bbl)

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

Drill String Runs							
BHA No.	ВНА						

		Date	1 9 P C
_		9/13/2007	Pre Spud Meeting
		9/14/2007	Pre-Job Meeting
		9/15/2007	Pre-Job Meeting
		9/15/2007	Pre-Job Meeting
	Ш		Supervisor
		JC LEMINOU	S

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 (°) Pito		h (°)	Heave (ft)	T (low) (°F)		

	Vessels\H	POB	
Vessel Name	Туре	Туре	Count
		Drlg Contractor	23
		Operator - D&C	5
		Service Cies	9
		Cumul POB :3	37

TOTAL Austral

Field: AGUADA PICHANA Platform: N/A

Rig: ODE-39, ENSIGN

ROP Tost

DOI 163t		
Туре	Last Date	Next Date
BOP's Test	9/15/2007	9/29/2007

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

WellBore **Survey Data** MD (ftKB) | TVD (ftKB) | Incl (°) | Azm (°) Branch AP-237 2,290.03 2,289.89 0.50

6:00 am Status : Drilling @ 913m.

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

Time Log

Start	Dur			Cum Dur
Time	(hrs)	Comment	Code	(hrs)
00:00	1.00	Retrieve tester plug & R/D testing equipment.	BOPTEST	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 linesR1.	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 manifiold. 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

Well Name: AP-237

Days w/o LTA: 228 Stop Cards

Parent Company Quantity 6"1/8, DRILLING Daily progress 492.13 Drilling Hours 5.00

Midnight depth

Date 9/16/2007 Report number 9 Water Depth Activity Type & N° DEV 1

Safety Incidents Туре

Casing :	Strings	Formation	าร	
Main Nom	Set Depth	Top Depth	Top Depth (TVD)	
OD (in)	(ftKB)	(ftKB)	(ftKB)	Formation Name
7	1,968.5	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.			

2,473.8

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.

Expected TD

5.594

Work on desilter motor from 11h00 to 22h30.

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

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

Cost (USD) Daily Cost: 44,141

Cumulative Cost: 591,624

Mud Costs Cost (Loc) 9,541 Cum Field (Loc)

Safety stocks Main Stock Des Consu.. Stock Baryte 0.0 16.0 Drilling Water 0.0 120.0 Diesel 2,520.0 10,860.0

Rit Dull

	ı araı	Hereis	•																		Dit Duli
							Int														Bit Dull
			TFA (incl				Depth	Drill Time		Cum Depth	Cum Drill Time			Flow Rate	RPM	Drill Tq			SO Str	FRW	
	BHA No.	Bit Run	Noz) (in²)	Bit and Core Head Inventory	Туре	Start (ftKB)	(It)	(hrs)	(ft/hr)	(ft)	(hrs)	WOB (kips)	SPP (psi)	(gpm)	(rpm)	(ft-lbs)	(ft-lbs)	Wt (kips)	Wt (kips)	(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	
1 1			•			•															1

Drill String Runs								
BHA No.	ВНА							
	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	Туре
		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 LEMINOL	IS

Weather Conditions								
Wave Dir (°)		Wave	Per (s)	Wa	ve Ht (ft)			
Wind Spd (kn		Wind [Dir (°)	Vis	Visibility (km)			
Current Spe	е	Currer	t Dir (°)	Ma	x Var Load			
Roll (°)	Pito	h (°)	Heave	(ft)	T (low) (°F)			

Support \	Vessels\H	РОВ			
/essel Name	Туре	Type	Count		
	•	Drlg Contractor	23		
		Operator - D&C	5		
		Service Cies	9		
		Cumul POB :	37		

TOTAL Austral

Field: AGUADA PICHANA Platform :N/A

Rig: ODE-39, ENSIGN

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

Daily Summary : Drill from 754m to 1096m. Stop operations due to rig personal.	Survey	WellBore			
2 m nom ro m to recom etcp operations and to hig percentain	MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	Branch
	2,854.33	2,854.04	2.00		AP-237
	2,979.00	2,978.61	2.50		
6:00 am Status :	3,106.96	3,106.44	2.50		Currented TD
Perform Totco in progress.	3,379.27	3,378.49	2.50		Expected TD
					5,594
Planned Operation: Drill 6"1/8 phase to +/- 1705m.					

Time Log

Start	Dur			Cum Dur
Time	(hrs)	Comment	Code	(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

Well Name: AP-237

Type

Days w/o LTA: 229							
Stop Cards							
Parent Company	Quantity						
Halliburton	6						

6"1/8, DRILLING	ì
Daily progress	1,122.05
Drilling Hours	16.00

Midnight depth

Next: 3 1/2" at 1702m.

Report number Water Depth Activity Type & N°

9/17/2007

10

DEV 1

Date

Casing Strings Formations

3,595.8

	<u>-</u> -			
Main Nom	Set Depth	Top Depth	Top Depth (TVD)	
OD (in)	(ftKB)	(ftKB)	(ftKB)	Formation Name
7	1,968.5	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
	Main Nom	Main Nom Set Depth OD (in) (ftKB)	Main Nom OD (in) 7 1,968.5 7,301.8 5,301.8	Main Nom OD (in) Set Depth (ftKB) Top Depth (ftKB) Top Depth (ftKB) 7 1,968.5 3,851.7 3,850.6 5,242.8 5,241.5 5,301.8 5,300.6

Mud

Remarks

From 00h00 to 06h00 :

Safety Incidents

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.

Mud Type		Densit	у (ECD	(lb/	M	ud Vol
Lime mud	ı	9.1	8	9	.85		
OW R	S	olids	Sand	<u>1</u>	LGS (%	6)	HGS (%)
		6.6	0.	.1	6.3		
PV OR (c	p)	YP OR	(l	YS C	Calc (M	arsh vi
19.0		14.	1.0 2.0		65.00		
Filtrate (r	пL	/30	HTHE	Filt	(mL/3	. 0	Oil Cutti
4.	0						
Mf (mL)		Pf (mL	.)	Pm ((mL)	рl	1
2.20		1.8	0	1	1.20		12.5
Gel 0 (lbf		Gel 10	(l	Ca (mg/L)	С	hlor (m
3		7		2	200		2,200
Commen	t						

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

Cost (USD) Daily Cost : 31,306 Cumulative Cost: 622,930 **Mud Costs** Cost (Loc) 6,706 Cum Field (Loc)

Safety stocks
Main Stock Des Unit Consu... Stock Baryte 0.0 Drilling Water 0.0 Diesel 3,920.0 6,940.0

16.0

120.0

Parameters											Bit Dull									
						Int														Bit Dull
						Depth	Drill Time	Int ROP	Cum Depth	Cum Drill Time			Flow Rate	RPM	Drill Tq					
BHA No.	Bit Run	Noz) (in²)	Bit and Core Head Inventory	Туре	Start (ftKB)	(ft)	(hrs)	(ft/hr)	(ft)	(hrs)	WOB (kips)	SPP (psi)	(gpm)	(rpm)	(ft-lbs)	(ft-lbs)	Wt (kips)	Wt (kips)	(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	
		BHA No. Bit Run	BHA No. Bit Run Noz) (in²)	TFA (incl	BHA No. Bit Run No2) (in²) Bit and Core Head Inventory Type	BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB)	BHA No. Bit Run TFA (incl Bit and Core Head Inventory Type Start (ftKB) (ft)	BHA No. Bit Run TFA (incl Bit and Core Head Inventory Type Start (ftKB) Int Depth Drill Time (ft) (ft) (hrs)	BHA No. Bit Run No2) (in²) Bit and Core Head Inventory Type Start (ftKB) (ft) (hrs) (ft/hr)	BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB) Int Depth (ft) (hrs) (ft) (ft)	BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB) Int Depth (ft) (hrs) (ft) (hrs) (ft/hr) (ft/hr) (ft/hr) (ft/hrs)	BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB) (ft) (hrs) (ft/hr) (ft/hr) (ft/hrs) (Cum Depth (Cum Drill Time (hrs) WOB (kips)	BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB) Int Depth (ft) (hrs) (ft/hr) (ft/hr) (ft/hr) (ft/hr) (ft/hr) (ft/hr) (word) (kips) SPP (psi)	BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB) Int Depth (ft) (hrs) (ft) (hrs) (ft) (ft) (hrs) (ft) (hrs) (ft) (hrs) (BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB) Int Depth (ft) (ft) (ft) (ft) (ft) (ft) (ft) (ft)	BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB) Int Depth (ft) (ft) (hrs) (ft) (ft) (ft) (ft) (ft) (ft) (ft) (ft	BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB) Int Depth (ft) (hrs) (ft) (hrs) (ft) (ft) (ft) (ft) (ft) (ft) (ft) (ft	BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB) Int Depth (ft) (hrs) (hrs) (ft) (hrs) (ft) (hrs) (ft) (hrs) (ft) (hrs) (hrs) (ft) (hrs) (BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB) Int Depth (ft) (hrs) (ft/hr) (ft/hr	BHA No. Bit Run Noz) (in²) Bit and Core Head Inventory Type Start (ftKB) Int Depth (ft) (hrs) (hrs) (ft) (hrs) (ft) (hrs) (ft) (hrs) (ft) (hrs) (hrs) (ft) (hrs) (

Drill String Runs						
BHA No.	BHA					
	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	Туре
	9/14/2007	Pre-Job Meeting
l	9/15/2007	Pre-Job Meeting
	9/15/2007	Pre-Job Meeting
	9/16/2007	Kick Drill
		Supervisor
	JC LEMINOL	IS

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 (°) Pito	h (°) Heave (ft) T (low) (°F)					

Support \	/essels\H	POB	
/essel Name	Type	Type	Count
		Drlg Contractor	23
		Operator - D&C	4
		Service Cies	9
		Cumul POB :3	36

TOTAL Austral

Field: AGUADA PICHANA Platform :N/A

Rig:ODE-39, ENSIGN

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

Daily Summary : Drill from 1096 to 1446m.		Survey Data				
Dim nom 1999 to 1440m.	MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)	Branch	
	3,730.31	3,729.30	1.75		AP-237	
	4,366.80	4,365.65	0.50			
6:00 am Status : Drilling @ 1566m.					Expected TD 5,594	
Planned Operation: Drill 6"1/8 phase to +/- 1705m.					,	

Time Log

Start	Dur			Cum Dur
Time	(hrs)	Comment	Code	(hrs)
00:00	1.00	Waiting on rig personal.	NRPER	1.00
01:00	0.50	Drill from 1096m to 1104m.	DRL	1.50
01:30	0.50	Rig power failure.	NRMISC	2.00
02:00	4.00	Drill from 1104m to 1153m.	DRL	6.00
06:00	0.75	Circulate B/U. Take survey with Totco.	DEVI	6.75
06:45	0.50	Drill from 1153m to 1163m.	DRL	7.25
07:15	0.25	Rig power failure.	NRMISC	7.50
07:30	2.00	Drill from 1163m to 1192m.	DRL	9.50
09:30	0.50	Rig maintenance. Change slings on kelly spinner.	RIGMTN	10.00
10:00	1.75	Drill from 1192m to 1221m.	DRL	11.75
11:45	0.25	Attempt to take Teledrift survey : No success.	NSDD	12.00
12:00	6.00	Drill from 1221m to 1346m.	DRL	18.00
18:00	1.00	Circulate B/U. Take survey with Totco.	DEVI	19.00
19:00	5.00	Drill from 1346m to 1446m.	DRL	24.00

Well Name: AP-237

Days w/o LTA:	6"1/8, DRILLING					
Stop Cards	Daily progress	_				
Parent Company	Quantity	Drilling Hours				
Contractor	7	Midnight depth				
Geoservices	4	Midnight depth	_			

·	
Daily progress	1,148.29
Drilling Hours	19.75
Midnight depth	4,744.1

Date	9/18/2007
Report number	11
Water Depth	
Report number Water Depth Activity Type & N°	DEV 1

Safety Incide	nts
Date	Туре

Casing 9		Formation	าร	
Main Nom	Set Depth	Top Depth	Top Depth (TVD)	
OD (in)	(ftKB)	(ftKB)	(ftKB)	Formation Name
7	1,968.5	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.			

Remarks
From 00h00 to 06h00 :

00h00 to 01h00 - Drill from 1446m to 1566m.

Mud									
Mud Type	•	Densit	у (ECD	(lb	l	М	ud Vol	
Lime mud		9.1	8	9	.85				
OW R	Sc	olids	Sand	t	LG	S (%	6)	HGS (9	%)
		6.6	0.	.1		6.3			
PV OR (c	p)	YP OR	(I	YS C	alc	(M	arsh vi.	
20.0		12.	0	:	2.0			55.00	
Filtrate (n	nL	/30	HTHE	Filt	(ml	_/3	. 0	Oil Cutti	i
4.	0								
Mf (mL)		Pf (mL	.)	Pm ((mL)	рl	1	
2.20		1.7	0	1	1.50)		12.5	
Gel 0 (lbf		Gel 10	(l	Ca (mg/	L)	CI	hlor (m.	
3		5		2	240			2,300	
Commen	t								_
						Fir	nal	Volume	_

		Final Volume
Vol Add (bbl)	Vol Lost (bbl)	(bbl)
6.3	86.8	712

Cost (USD)

Daily Cost : 30,038

Cumulative Cost: 652,968

Mud Costs
Cost (Loc)
5,438
Cum Field (Loc)
43.779

Safety stocks								
Main Stock Des	Unit	Consu	Stock					
Baryte	kg	0.0	16.0					
Drilling Water	m³	0.0	120.0					
Diesel	L	4,200.0	17,740.0					

Parameter	S																	Bit Dull
				Int														Bit Dull
	TFA (incl			Depth	Drill Time	Int ROP	Cum Depth	Cum Drill Time			Flow Rate	RPM	Drill Tq	Off Btm Tq			FRW	
BHA No. Bit Run	Noz) (in²) Bit and Core Head Inventory	Type	Start (ftKB)	(ft)	(hrs)	(ft/hr)	(ft)	(hrs)	WOB (kips)	SPP (psi)	(gpm)	(rpm)	(ft-lbs)	(ft-lbs)	Wt (kips)	Wt (kips)	(kips)	
2 2	0.38 6 1/8in, HC-505, 7302760	Drill Formation	3,595.8	1,148.29	19.75	58.1	2,762.47	40.75	13.2	1,958.0	277	150			103.6	94.8	99.2	
,								•							•		•	1

Drill String Runs							
BHA No.	ВНА						
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	Туре
	9/14/2007	Pre-Job Meeting
	9/15/2007	Pre-Job Meeting
	9/15/2007	Pre-Job Meeting
	9/16/2007	Kick Drill
П		Supervisor
	JC LEMINOL	S

Weathe	er (Cond	itions	5	
Wave Dir (°)		Wave P	er (s)	Wa	ve Ht (ft)
Wind Spd (k	n	Wind Di	r (°)	Visi	bility (km)
Current Spe	е	Current	Dir (°)	Max	Var Load
Roll (°)	Pito	:h (°)	Heave (ft)	T (low) (°F)

Support \	Vessels\H	РОВ			
Vessel Name	Туре	Type	Count		
	•	Drlg Contractor	23		
		Operator - D&C	5		
		Service Cies	9		
		Cumul POR :	27		

TOTAL Austral

Field: AGUADA PICHANA Platform: N/A

Rig: ODE-39, ENSIGN

BOP Test

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

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

Survey Data

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

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

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

Ti	me	Log

Start	Dur			Cum Dur
Time	(hrs)	Comment	Code	(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 hivis 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

Well Name: AP-237

Days w/o LTA: 231 Stop Cards Parent Company Quantity

Daily progress 872.70 Drilling Hours 14.00 Midnight depth 5,616.8

6"1/8, DRILLING

Date 9/19/2007 12 Report number Water Depth Activity Type & N° DEV 1

Safety Incidents Type

	Casing		Formation		
	Main Nom	Set Depth	Top Depth	Top Depth (TVD)	
┨	OD (in)	(ftKB)	(ftKB)	(ftKB)	Formation Name
	7	1,968.5	3,851.7	3,850.6	Avile
			5,242.8	5,241.5	Upper Mulichinco
			5,301.8	5,300.6	Middle Mulichinco
	11		5,508.5	5,507.2	Lower Mulichinco
	Next: 3 1/2	" at 1702m.			

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 hivis & circulate hole clean with FR=1050lpm,

P=2200psi.....R1.

R1: TG=8%

Mud										
Mud Type	•	Den	ısit	у (ECD	(lb	/	M	ud Vol	
Lime mud		!	9.3	5						
OW R	Sc	olids	·	Sand	t	LG	S (%	6)	HGS (%)	
		7.4		0.			7.4			
PV OR (c	p)	YP (OR	(l	YS C	alc	: (M	arsh vi	
20.0			16.	0		2.0			65.00	
Filtrate (n	nL	/30	.	HTHE	Filt	(m	L/3	. 0	Oil Cutti	
4.	0									
Mf (mL)		Pf (mĹ)	Pm ((mL)	рŀ	1	
1.60			1.30		11.00)	12.5		
Gel 0 (lbf		Gel	10	(l	Ca (mg/L)		L)	Chlor (m		
3			6 24			240	240		25,000	
Commen	t									
Work on desilter				otor						
Vol Add	(bl	ol)	٧	Vol Lost (bbl)				Final Volume (bbl)		

581.7

Mud Costs Daily Cost : 29,208 Cost Cost (Loc) Cumulative Cost: 682,176 4,608 (USD) Cum Field (Loc)

Safety stocks Main Stock Des Consu... Stock Baryte 0.0 16.0 Drilling Water 0.0 120.0 Diesel 4,840.0 12,900.0

	Parai	neters	3																	Bit Dull
						Int														Bit Dull
!			TFA (incl			Depth	Drill Time	Int ROP	Cum Depth	Cum Drill Time			Flow Rate	RPM		Off Btm Tq		SO Str	FRW	
!	BHA No.	Bit Run	Noz) (in²) Bit and Core Head Inventory	Туре	Start (ftKB)	(ft)	(hrs)	(ft/hr)	(ft)	(hrs)	WOB (kips)	SPP (psi)	(gpm)	(rpm)	(ft-lbs)	(ft-lbs)	Wt (kips)	Wt (kips)	(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	

Expected TD

5.594

Drill Strir	ng Runs
BHA No.	BHA
	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	Туре
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 LEMINOU	S

	Weathe	er (Cond	itions	3	
	Wave Dir (°)		Wave Po	er (s)	Wav	ve Ht (ft)
	Wind Spd (k	n	Wind Di	r (°)	Visi	bility (km)
	Current Spe	е	Current	Dir (°)	Max	Var Load
	Roll (°)	Pito	h (°)	Heave (ft)	T (low) (°F)

Support '	Vessels\H	POB	
Vessel Name	Туре	Туре	Count
		Drlg Contractor	23
		Operator - D&C	5
		Service Cies	11
		Cumul POB :3	9

TOTAL Austral

Field: AGUADA PICHANA Platform :N/A

Rig: ODE-39, ENSIGN

ROP Tost

DO 1 1000		
Туре	Last Date	Next Date
BOP's Test	9/15/2007	9/29/2007

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

WellBore Survey Data

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

6:00 am Status : Continue WL logging.

Planned Operation : 3"1/2 csg.

Comp	lete wire	line	logging.	RIH :	3"

ııme	Log

Start	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	, ,	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 hivis & 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.	кск	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.		

Well Name: AP-237

Days w/o LTA: 232 Stop Cards Parent Company

Quantity

6"1/8, DRILLING

Daily progress 0.00 Drilling Hours Midnight depth 5,616.8

Date 9/20/2007 Report number 13 Water Depth Activity Type & N° DEV 1

Safety Incidents Туре

	Casing	Strings	Formation	าร	
	Main Nom	Set Depth	Top Depth	Top Depth (TVD)	
1	OD (in)	(ftKB)	(ftKB)	(ftKB)	Formation Name
	7	1,968.5	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.			

Remarks

Expected TD 5,594

From 00h00 to 06h00

00h00 to 06h00 - Continue Wire line logging.

Run#3 : CMR - GR. Run#4 : MDT

Mud								
Mud Type	9	Densi	ty (ECD	(lb/	M	ud Vol	
Lime mud		9.3	5					
OW R	S	olids Sand		d	LGS (%	6) HGS (%)		
		7.7	0	.1	7.4			
PV OR (c	YP OF	(I	YS C	Calc (M	arsh vi		
22.0		12.0		2.0		65.00		
Filtrate (r	nL	/30	HTHE	Filt	(mL/3	. 0	Dil Cutti	
4.	0							
Mf (mL)		Pf (mL	-)	Pm ((mL)	рŀ	1	
2.40 1.9		0	11.00		12.5			
Gel 0 (lbf G		Gel 10	Gel 10 (l		Ca (mg/L)		Chlor (m	
3		6		240		2,500		

Comment

		Final Volume
Vol Add (bbl)	Vol Lost (bbl)	(bbl)
0.0	87.4	494

Cost (USD) Daily Cost : 25,647

Cumulative Cost: 707,823

Mud Costs Cost (Loc) 1,047 Cum Field (Loc)

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							
1										

Parameters											Bit Dull										
							Int														Bit Dull
			TFA (incl				Depth	Drill Time		Cum Depth	Cum Drill Time			Flow Rate	RPM	Drill Tq	Off Btm Tq		SO Str		1-1-ER-N-X-0-WT-TD
	BHA No.	Bit Run	Noz) (in²)	Bit and Core Head Inventory	Туре	Start (ftKB)	(ft)	(hrs)	(ft/hr)	(ft)	(hrs)	WOB (kips)	SPP (psi)	(gpm)	(rpm)	(ft-lbs)	(ft-lbs)	Wt (kips)	Wt (kips)	(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.	вна									
	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									

П	Date	Туре
	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 LEMINOL	IS

Weath	er (Cond	itions	3			
Wave Dir ((°)	Wave P	er (s)	Wa	ve Ht (ft)		
Wind Spd (kn		Wind D	ir (°)	Visibility (km)			
Current S	oee	Current	Dir (°)	Max	Var Load		
Roll (°)	Pito	h (°)	Heave (ft)	T (low) (°F)		

Support \	Vessels\H	POB				
/essel Name	Туре	Туре	Count			
	•	Drlg Contractor	23			
		Operator - D&C	7			
		Service Cies	11			
		Cumul POR :	11			

TOTAL Austral

Field: AGUADA PICHANA Platform :N/A

DIM JODE 20 ENGION

Rig :ODE-39,	ENSIGN
BOP Test	

DO : 1000		
Туре	Last Date	Next Date
BOP's Test	9/15/2007	9/29/2007

Daily Summary : Complete WL logging. RIH 3.5" csg in progress @593m.	Survey	Survey Data					
	MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)			
					AP-237		
		1		1			

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

6:00 am Status :

Start	Dur			Cum Dur
Time	(hrs)	Comment	Code	(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

Well Name: AP-237

Days w/o LTA: 233					
Stop Cards					
Parent Company	Quantity				
Geoservices	5				
Others	1				
Schlumberger	1				
Total	3				
·					
Safety Incidents					

6 1/8, CASING 8	& CEIVIEN I	
		R
Daily progress	0.00	V
Drilling Hours		Δ
Midnight depth	5 616 8	

	Date	9/21/2007
	Report number	14
	Water Depth	
	Report number Water Depth Activity Type & N°	DEV 1

l I	3	Casing 9	Strings	Formation	าร	
		Main Nom	Set Depth	Top Depth	Top Depth (TVD)	
£ - 4 - 1 ! - ! -	4	OD (in)	(ftKB)	(ftKB)	(ftKB)	Formation Name
fety Incidents		7	1,968.5	3,851.7	3,850.6	Avile
Date	Type	3 1/2	5,604.0	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 1708m.			

Remarks

From 00h00 to 06h00 :

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

Mud							
Mud Type	Densi	sity (ECD		(lb/	M	ud Vol	
Lime mud	9.3	9.35					
OW R S	olids	San	d	LGS (%)	HGS (%)	
	7.7	0	.1	7.4			
PV OR (cp	YP OF	(I	YS C	alc (M	arsh vi	
22.0	12	.0	:	2.0		65.00	
Filtrate (m	L/30	HTH	Filt	(mL/3.	0	Oil Cutti	
4.0							
Mf (mL)	Pf (mL	-)	Pm (mL)	pl	Н	
2.40	1.9	90	1	1.00		12.5	
Gel 0 (lbf	Gel 10) (l	Ca (mg/L)	С	hlor (m	
3	6		2	240		2,500	
Comment	•						
				F	ina	l Volume	

Vol Lost (bbl)

Vol Add (bbl)

(bbl)

Mud Costs Daily Cost : 112,494 Cost Cost (Loc) Cumulative Cost: 820,317 2,481 (USD) Cum Field (Loc)

Safety stocks
Main Stock Des Unit Consu... Stock Baryte 0.0 16.0 Drilling Water 0.0 120.0 Diesel 2,000.0 18,100.0

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

Expected TD 5,594

Drill String Runs				
BHA No.	ВНА			

ı	Date	Type	wea
	9/16/2007	Kick Drill	Wave
	9/20/2007	Pre-Job Meeting	vvave
	9/21/2007	Pre-Job Meeting	Wind S
	9/21/2007	Pre-Job Meeting	vviiiu s
		Supervisor	Currer
	JC LEMINOL	S	ouc.
			Roll (°)
ı			

Į	Weather Conditions							
	Wave Dir (°	Wave Dir (°)		Wave Per (s)		ve Ht (ft)		
	Wind Spd (Wind Spd (kn Current Spee		, ,		Visibility (km) Max Var Load		
	Current Sp							
	Roll (°)	Pito	h (°)	Heave (ft)	T (low) (°F)		

Support \	Vessels\H	POB	
Vessel Name	Туре	Туре	Count
		Drlg Contractor	22
		Operator - D&C	5
		Service Cies	18
		Cumul POB :4	5

TOTAL Austral

Field: AGUADA PICHANA Platform: N/A

Ria: ODE-39. ENSIGN

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

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.

WellBore Survey Data MD (ftKB) | TVD (ftKB) | Incl (°) | Azm (° Branch AP-237

6:00 am Status :

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

Time Log

Start	Dur			Cum Dur
Time	(hrs)	Comment	Code	(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 programR1.	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 5000psiR2.	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		

Well Name: AP-237

Days w/o LTA: 234 **Stop Cards** Parent Company Quantity Halliburton

6"1/8, CASING & CEMENT Daily progress 0.00 Drilling Hours

Midnight depth

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

Safety Incidents Type

	Casing		Formation					
	Main Nom	Set Depth	Top Depth	Top Depth (TVD)				
┪	OD (in)	(ftKB)	(ftKB)	(ftKB)	Formation Name			
	7	1,968.5	3,851.7	3,850.6	Avile			
	3 1/2	5,604.0	5,242.8	5,241.5	Upper Mulichinco			
			5,301.8	5,300.6	Middle Mulichinco			
			5,508.5	5,507.2	Lower Mulichinco			
	Nev	/t ·						

5,616.8

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.

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

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

Cost (USD) Daily Cost : 345,832

Cumulative Cost: 1,166,149

Mud Costs Cost (Loc) 2,602 Cum Field (Loc) 54.517

Safety stocks Main Stock Des Consu.. Stock Baryte 0.0 16.0 Drilling Water 0.0 120.0 Diesel 2,800.0 15,300.0

Parameters										Bit Duli										
						Int														Bit Dull
			TFA (incl			Depth	Drill Time		Cum Depth	Cum Drill Time			Flow Rate	RPM		Off Btm Tq			FRW	
	BHA No.	Bit Run	Noz) (in²) Bit and Core Head Inventory	Туре	Start (ftKB)	(ft)	(hrs)	(ft/hr)	(ft)	(hrs)	WOB (kips)	SPP (psi)	(gpm)	(rpm)	(ft-lbs)	(ft-lbs)	Wt (kips)	Wt (kips)	(kips)	
- 1																				

Expected TD 5.594

Drill String Runs									
BHA No.	ВНА								

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

Weather Conditions								
Wave Dir (°)		Wave Po	er (s)	Wa	ve Ht (ft)			
Wind Spd (k	n	Wind Di	r (°)	Visibility (km)				
Current Spee		Current	Dir (°)	Max Var Load				
Roll (°)	Pitc	h (°)	Heave (ft) T (low) (°F)				

Support \	Vessels\H	POB					
Vessel Name	Туре	Туре	Count				
		Drlg Contractor	22				
		Operator - D&C	3				
		Service Cies	18				
		Cumul POB :4	3				