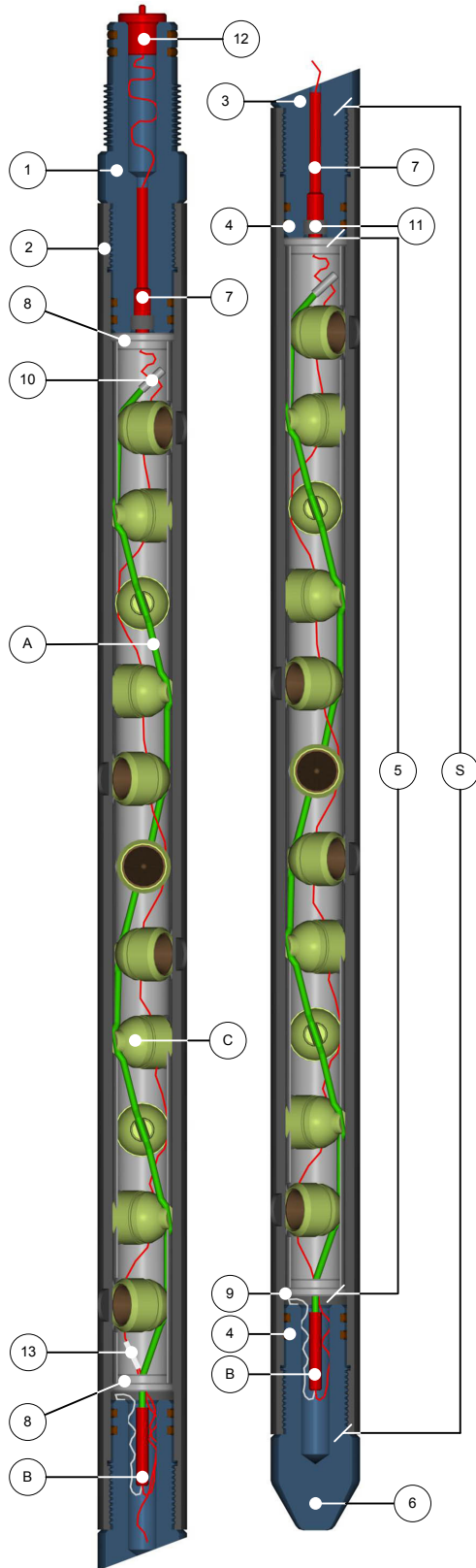


**RETRIEVABLE
THROUGH TUBING GUN
SYSTEM**

1 9/16" Retrievable Through Tubing Gun 6 SPF 60° BOTTOM FIRE

Revision Dic 2004
Page 1 of 2



ITEM	Part Nbr.	DESCRIPTION
1	ERT-1563-001	Top Sub 1 9/16" For WL
2	ERT-1563-006	1 9/16" Scalloped Gun Body 21', 6 SPF, 60°
	ERT-1563-007	1 9/16" Scalloped Gun Body 15', 6 SPF, 60°
	ERT-1563-008	1 9/16" Scalloped Gun Body 11', 6 SPF, 60°
	ERT-1563-009	1 9/16" Scalloped Gun Body 7', 6 SPF, 60°
	ERT-1563-010	1 9/16" Scalloped Gun Body 4', 6 SPF, 60°
3	ERT-1563-011	1 9/16" Tandem Sub
4	ERT-1563-016	O-rings Kit
5	ERT-1563-021	Loading tube 21', 6 SPF, 60°
	ERT-1563-022	Loading tube 15', 6 SPF, 60°
	ERT-1563-023	Loading tube 11', 6 SPF, 60°
	ERT-1563-024	Loading tube 7', 6 SPF, 60°
	ERT-1563-025	Loading tube 4', 6 SPF, 60°
6	ERT-1563-026	1 9/16" Bull Plug
7	ERT-2000-031	Dart seal - Simultaneous firing mode
	ERT-2000-032	Diode assy. - Selective firing mode
8	ERT-1563-036	End Plates
9	ERT-1563-041	Snap Rings
10	ERT-1563-046	Detonating Cord End Cover
11	ERT-2000-033	Dart seal or Diode assy. Retainer Nut
12	ERT-2000-034	Lead wire assy w/contact spring
13	ERT-2000-035	Lead wire splice
A		40 Grains High Velocity Detonating Cord
C	RT37H	1 9/16" RTG, HMX
	RT37HBH	1 9/16" RTG, HMX BH
S	ERT-1563-061	Shipping Assy 21', 6 SPF, 60°
	ERT-1563-062	Shipping Assy 15', 6 SPF, 60°
	ERT-1563-063	Shipping Assy 11', 6 SPF, 60°
	ERT-1563-064	Shipping Assy 7', 6 SPF, 60°
	ERT-1563-065	Shipping Assy 4', 6 SPF, 60°

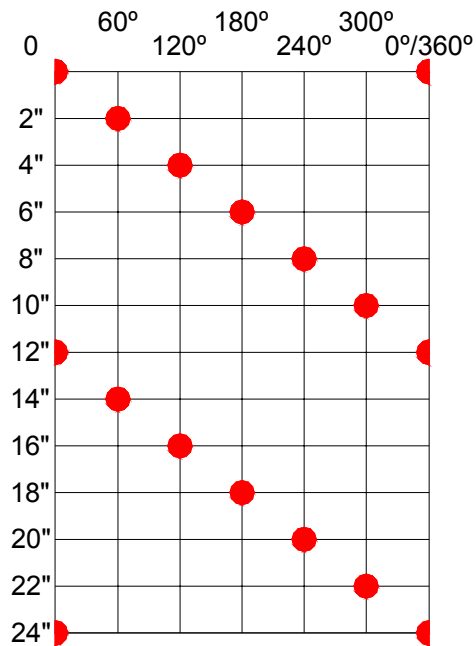
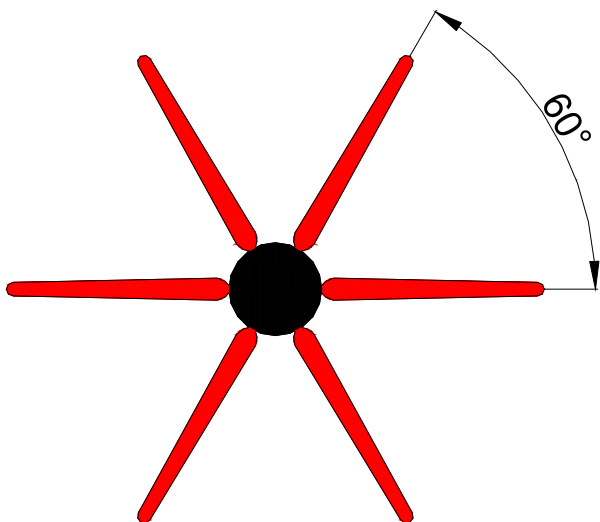
SYSTEM PRESSURE RATING 20,000 PSI

API RP 19B Certified

1 9/16" Retrievable Through Tubing Gun
6 SPF 60°

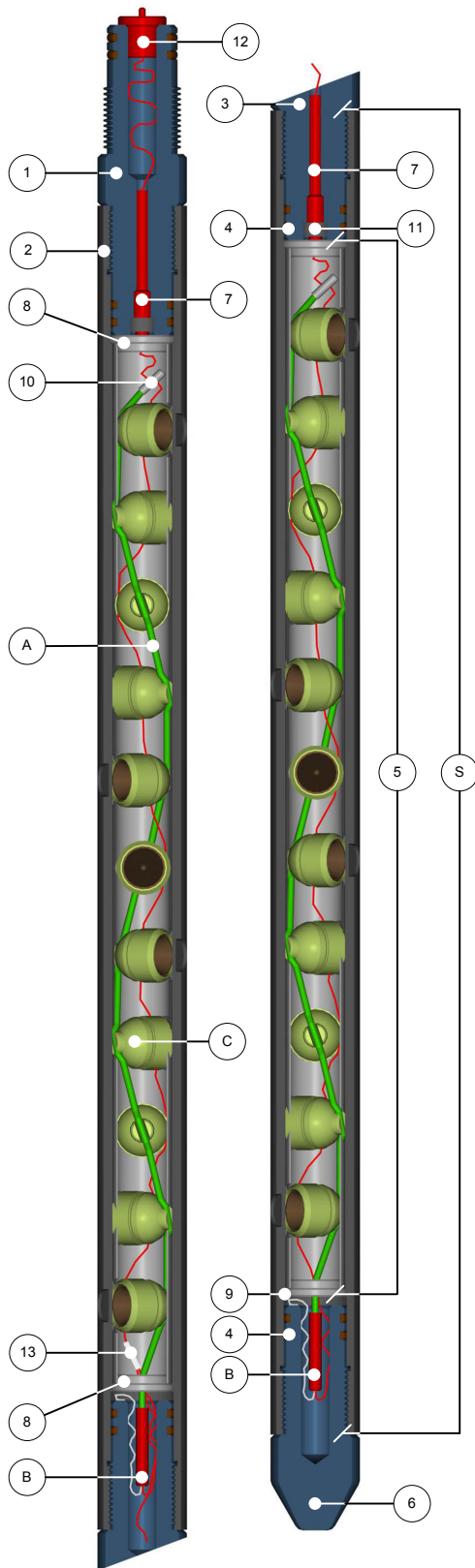
Revision Dic 2004
Page 2 of 2

6 SPF 60°



2" Retrievable Through Tubing Gun 6 SPF 60° BOTTOM FIRE

Revision Dic 2004
Page 1 of 2

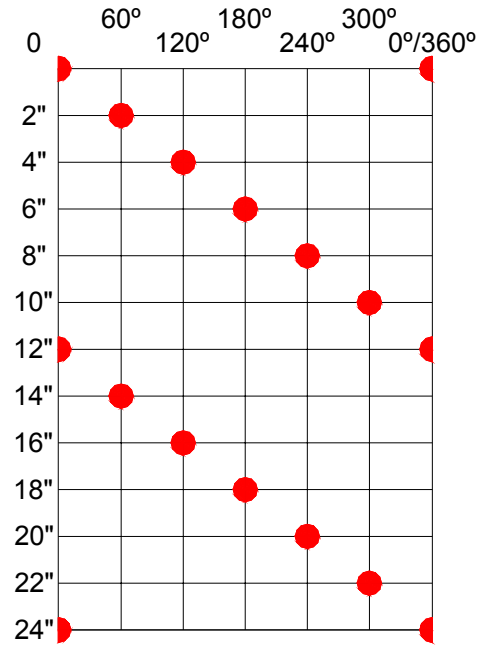
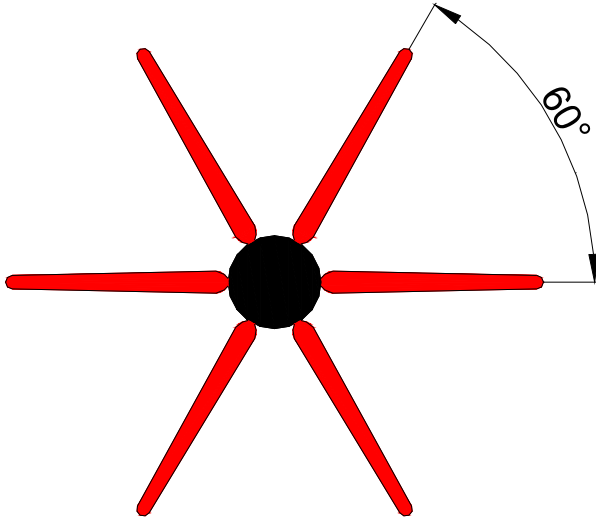


ITEM	Part Nbr.	DESCRIPTION
1	ERT-2000-001	Top Sub 2" For WL
2	ERT-2000-006	2" Scalloped Gun Body 21', 6 SPF, 60°
	ERT-2000-007	2" Scalloped Gun Body 15', 6 SPF, 60°
	ERT-2000-008	2" Scalloped Gun Body 11', 6 SPF, 60°
	ERT-2000-009	2" Scalloped Gun Body 7', 6 SPF, 60°
	ERT-2000-010	2" Scalloped Gun Body 4', 6 SPF, 60°
3	ERT-2000-011	2" Tandem Sub
4	ERT-2000-016	O-rings Kit
5	ERT-2000-021	Loading tube 21', 6 SPF, 60°
	ERT-2000-022	Loading tube 15', 6 SPF, 60°
	ERT-2000-023	Loading tube 11', 6 SPF, 60°
	ERT-2000-024	Loading tube 7', 6 SPF, 60°
	ERT-2000-025	Loading tube 4', 6 SPF, 60°
6	ERT-2000-026	2" Bull Plug
7	ERT-2000-031	Dart seal - Simultaneous firing mode
	ERT-2000-032	Diode assy. - Selective firing mode
8	ERT-2000-036	End Plates
9	ERT-2000-041	Snap Rings
10	ERT-2000-046	Detonating Cord End Cover
11	ERT-2000-033	Dart seal or Diode assy. Retainer Nut
12	ERT-2000-034	Lead wire assy w/contact spring
13	ERT-2000-035	Lead wire splice
A		40 Grains High Velocity Detonating Cord
C	RT36H	2" RTG, HMX
	RT36RBH	2" RTG BH RDX
S	ERT-2000-061	Shipping Assy 21', 6 SPF, 60°
	ERT-2000-062	Shipping Assy 15', 6 SPF, 60°
	ERT-2000-063	Shipping Assy 11', 6 SPF, 60°
	ERT-2000-064	Shipping Assy 7', 6 SPF, 60°
	ERT-2000-065	Shipping Assy 4', 6 SPF, 60°

SYSTEM PRESSURE RATING 20,000 PSI

API RP 19B Certified

6 SPF 60°





REGISTERED DATA SHEET PERFORATING SYSTEM EVALUATION, API RP 19B SECTION 1

Service Company Available to all Design Number Explosive Weight 3.5 gm, HMX powder, Case Material Steel
Gun OD & Trade Name 1 9/16" RTTG 6 SPF 60° Max. Temp, °F 400 1 hr 3 hr 24 hr 100 hr 200 hr
Charge Name 1 9/16" RTG HMX BH (DSC 04-07-40) Maximum Pressure Rating 20.000 psi, Carrier Material Steel
Manufacturer Charge Part No. RT37HBH Date of Manufacture July 30th 2004 Shot Density Tested 6 Shots/ft
Gun Type Retrievable Trough Tubing Gun 6 SPF 60° Recommended Minimum ID for Running * in.
Phasing Tested 60 degrees, Firing Order X Top Down, Bottom Up Available Firing Mode Selective, Simultaneous
Debris Description Case Debris kept inside the gun after shooting Debris Weight N/A gm/charge, Debris N/A in³/charge
Remarks * Gun OD after shooting 1.74 in.

SECTION 1 - CONCRETE TARGET

Casing Data 2 7/8" OD, Weight 6.4 lb/ft, L-80 API Grade, Date of Section 1 Test August 30th 2004
Target Data 40.5" OD, Amount of Cement 1900 lb., Amount of Sand 3800 lb., Amount of Water 990 lb.
Date of Compressive Strength Test August 31st 2004, Briquette Compressive Strength 5861 psi, Age of Target 31 days

Table with columns for Shot No. (1-22) and rows for Clearance, Casing Hole Diameter (Short/Long Axis), Average Casing Hole Diameter, Total Depth, Burr Height. Includes an Average column for shots 1-11 and 12-22.

WITNESSING INFORMATION

Date of Notice of Intent to Test: July 27th 2004 Witnessed by: J. Smirnov (API Certified)
Other Activities Witnessed: Target Pouring Briqueite: Preparation Testing X Burr Height Measurement X Samples Taken: Concrete X Casing X

CERTIFICATION

I certify that these tests were made according to the procedures as outlined in API RP 19B: Recommended Practices for Evaluation of Well Perforators, First Edition, November 2000. All of the equipment used in these tests, such as the guns, jet charges detonator cord, etc., was standard equipment with our company for the use in the gun being tested and was not changed in any manner for the test.

X CERTIFIED BY DARIO C. PAVANZO Perforating Project Manager Sept 1st 2004 Explosivos Tecnicos Argentinos S.A. Ruta 25Km.13 Pilar- Bs.As. Argentina
RE-CERTIFIED (Title) (Date) (Company) (Address)

DARIO C. PAVANZO
GERENTE PRODUCTO Y SISTEMAS
PERFORATING PROJECTS MANAGER



REGISTERED DATA SHEET PERFORATING SYSTEM EVALUATION, API RP 19B SECTION 1

Service Company Available to all Design Number _____ Explosive Weight 3.5 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 1 9/16" RTTG 6 SPF 60" Max. Temp, °F 400 1 hr 3 hr 24 hr 100 hr 200 hr
 Charge Name 1 9/16" RTG HMX (DSC 02-12-24) Maximum Pressure Rating 20.000 psi, Carrier Material Steel
 Manufacturer Charge Part No. RT-37- H Date of Manufacture Dec 18th 2002 Shot Density Tested _____ 6 _____ Shots/ft
 Gun Type Retrievable trough tubing gun Recommended Minimum ID for Running _____ * _____ in.
 Phasing Tested 60 degrees, Firing Order X Top Down, _____ Bottom Up Available Firing Mode _____ X _____ Selective, _____ X _____ Simultaneous
 Debris Description _____ Case Debris kept inside the gun after shooting Debris Weight _____ N/A _____ gm/charge, Debris _____ N/A _____ in³/charge
 Remarks * Gun OD after shooting 1.74 in.

SECTION 1 - CONCRETE TARGET

Casing Data 2 7/8" OD, Weight 6.4 lb/ft, L-80 API Grade, Date of Section 1 Test _____
 Target Data 54 3/4" OD, Amount of Cement 3525 lb., Amount of Sand 7050 lb., Amount of Water 1833 lb.
 Date of Compressive Strength Test 01-20-2003, Briquette Compressive Strength 6.922 psi, Age of Target 31 days

Shot No.	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10	No. 11
Clearance, in.	<u>0.00</u>	<u>0.159</u>	<u>0.598</u>	<u>0.879</u>	<u>0.598</u>	<u>0.159</u>	<u>0.00</u>	<u>0.159</u>	<u>0.598</u>	<u>0.879</u>	<u>0.598</u>
Casing Hole Diameter, Short Axis, in..	<u>0.169</u>	<u>0.250</u>	<u>0.152</u>	<u>0.149</u>	<u>0.147</u>	<u>0.156</u>	<u>0.149</u>	<u>0.137</u>	<u>0.147</u>	<u>0.150</u>	<u>0.162</u>
Casing Hole Diameter, Long Axis, in...	<u>0.171</u>	<u>0.267</u>	<u>0.165</u>	<u>0.156</u>	<u>0.149</u>	<u>0.157</u>	<u>0.174</u>	<u>0.154</u>	<u>0.161</u>	<u>0.160</u>	<u>0.163</u>
Average Casing Hole Diameter, in.....	<u>0.170</u>	<u>0.258</u>	<u>0.158</u>	<u>0.152</u>	<u>0.148</u>	<u>0.156</u>	<u>0.161</u>	<u>0.145</u>	<u>0.154</u>	<u>0.155</u>	<u>0.162</u>
Total Depth, in.	<u>9.52</u>	<u>8.146</u>	<u>11.896</u>	<u>12.271</u>	<u>9.396</u>	<u>9.396</u>	<u>9.771</u>	<u>9.646</u>	<u>8.146</u>	<u>11.521</u>	<u>8.521</u>
Burr Height, in.	<u>0.033</u>	<u>0.103</u>	<u>0.039</u>	<u>0.032</u>	<u>0.032</u>	<u>0.029</u>	<u>0.043</u>	<u>0.041</u>	<u>0.038</u>	<u>0.056</u>	<u>0.046</u>

Shot No.	No. 12	No. 13	No. 14	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20	No. 21	No. 22	Average
Clearance, in.	<u>0.159</u>	<u>0.00</u>	<u>0.159</u>	<u>0.598</u>	<u>0.879</u>	<u>0.598</u>	<u>0.159</u>	<u>0.00</u>	<u>0.159</u>			<u>0.366</u>
Casing Hole Diameter, Short Axis, in..	<u>0.154</u>	<u>0.158</u>	<u>0.160</u>	<u>0.157</u>	<u>0.158</u>	<u>0.162</u>	<u>0.160</u>	<u>0.163</u>	<u>0.150</u>			<u>0.160</u>
Casing Hole Diameter, Long Axis, in...	<u>0.170</u>	<u>0.180</u>	<u>0.180</u>	<u>0.167</u>	<u>0.160</u>	<u>0.180</u>	<u>0.165</u>	<u>0.170</u>	<u>0.170</u>			<u>0.171</u>
Average Casing Hole Diameter, in.....	<u>0.162</u>	<u>0.169</u>	<u>0.170</u>	<u>0.162</u>	<u>0.159</u>	<u>0.171</u>	<u>0.162</u>	<u>0.166</u>	<u>0.160</u>			<u>0.165</u>
Total Depth, in.	<u>8.271</u>	<u>8.021</u>	<u>6.396</u>	<u>9.771</u>	<u>13.396</u>	<u>7.521</u>	<u>8.021</u>	<u>10.771</u>	<u>9.458</u>			<u>9.493</u>
Burr Height, in.	<u>0.021</u>	<u>0.033</u>	<u>0.038</u>	<u>0.041</u>	<u>0.032</u>	<u>0.029</u>	<u>0.040</u>	<u>0.036</u>	<u>0.038</u>			<u>0.040</u>

WITNESSING INFORMATION

Date of Notice of Intent to Test: April 22th 2002 Witnessed by: J. Smirnov (API Certified)
 Other Activities Witnessed: Target Pouring _____ Briquette: Preparation _____ Testing X Burr Height Measurement X Samples Taken: Concrete X Casing X

CERTIFICATION

I certify that these tests were made according to the procedures as outlined in API RP 19B: Recommended Practices for Evaluation of Well Perforators, First Edition, November 2000. All of the equipment used in these tests, such as the guns, jet charges detonator cord, etc., was standard equipment with our company for the use in the gun being tested and was not changed in any manner for the test. Furthermore, the equipment was chosen at random from stock and therefore will be substantially the same as the equipment, which would be furnished to perforate a well for any operator. The American Petroleum Institute neither endorses these test results nor recommends the use of the perforator system described.

X CERTIFIED BY Oscar Migliorata Explosives Plant Manager Jan 20 th 2003 Explosivos Tecnologicos Argentinos S.A. Ruta 25Km.13 Pilar- Bs.As. Argentina
 _____ RECERTIFIED _____ (Company Official) _____ (Title) _____ (Date) _____ (Company) _____ (Address)



REGISTERED DATA SHEET PERFORATING SYSTEM EVALUATION, API RP 19B SECTION 1

Service Company Available to all Design Number _____ Explosive Weight 6.5 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 2" RTTG, BH HMX Max. Temp, °F 400 1 hr _____ 3 hr _____ 24 hr _____ 100 hr _____ 200 hr
 Charge Name 2" RTG, BH HMX (DSC 04-07-39) Maximum Pressure Rating 20,000 psi, Carrier Material Steel
 Manufacturer Charge Part No. RT 36 HBH Date of Manufacture July 28th 2004 Shot Density Tested _____ 6 _____ Shots/ft
 Gun Type _____ Retrievable Through Tubing Gun, 6 SPF 60° Recommended Minimum ID for Running _____ * _____ in.
 Phasing Tested 60 degrees, Firing Order X Top Down, _____ Bottom Up Available Firing Mode _____ Selective, _____ Simultaneous
 Debris Description N/A Debris Weight N/A gm/charge, Debris N/A in³/charge
 Remarks * Gun OD after shooting in liquid is 2.17in., in air 2.23in.

SECTION 1 - CONCRETE TARGET

Casing Data 3 1/2" OD, Weight 9.2 lb/ft, L-80 API Grade, Date of Section 1 Test August 30th 2004
 Target Data 40" OD, Amount of Cement 1900 lb., Amount of Sand 3800 lb., Amount of Water 990 lb.
 Date of Compressive Strength Test August 31st 2004, Briquette Compressive Strength 6105 psi, Age of Target 31 days

Shot No.	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10	No. 11	
Clearance, in.	0.00	0.180	0.656	0.953	0.656	0.180	0.00	0.180	0.656	0.953	0.656	
Casing Hole Diameter, Short Axis, in.	0.40	0.43	0.40	0.38	0.41	0.40	0.39	0.42	0.44	0.38	0.37	
Casing Hole Diameter, Long Axis, in.	0.46	0.47	0.41	0.40	0.44	0.47	0.42	0.44	0.47	0.41	0.40	
Average Casing Hole Diameter, in.	0.430	0.450	0.405	0.390	0.425	0.435	0.405	0.430	0.455	0.395	0.385	
Total Depth, in.	6.006	6.506	5.256	5.506	5.006	7.006	5.756	6.256	5.006	6.006	6.506	
Burr Height, in.	0.081	0.073	0.068	0.062	0.059	0.071	0.053	0.042	0.069	0.088	0.045	
Shot No.	No. 12	No. 13	No. 14	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20	No. 21	No. 22	Average
Clearance, in.	0.180	0.00	0.180									0.388
Casing Hole Diameter, Short Axis, in.	0.39	0.36	0.43									0.400
Casing Hole Diameter, Long Axis, in.	0.41	0.40	0.44									0.431
Average Casing Hole Diameter, in.	0.400	0.380	0.435									0.416
Total Depth, in.	5.756	5.506	5.756									5.845
Burr Height, in.	0.054	0.050	0.068									0.063

WITNESSING INFORMATION

Date of Notice of Intent to Test: July 27th 2004

Witnessed by: [Signature] J. Smirnov (API Certified)

Other Activities Witnessed: Target Pouring _____ Briquette Preparation _____ Testing X Burr Height Measurement X Samples Taken: Concrete X Casing X

CERTIFICATION

I certify that these tests were made according to the procedures as outlined in API RP 19B: Recommended Practices for Evaluation of Well Perforators, First Edition, November 2000. All of the equipment used in these tests, such as the guns, jet charges detonator cord, etc., was standard equipment with our company for the use in the gun being tested and was not changed in any manner for the test. Furthermore, the equipment was chosen at random from stock and therefore will be substantially the same as the equipment, which would be furnished to perforate a well for any operator. The American Petroleum Institute neither endorses these test results nor recommends the use of the perforator system described.

X CERTIFIED BY [Signature] E. T. A. S. A. Perforating Projects Manager Sept 1st 2004 Explosivos Tecnológicos Argentinos S.A. Ruta 25Km.13 Pilar- Bs.As. Argentina
 _____ RECERTIFIED _____ (Title) (Date) (Company) (Address)

MARIO L. RATTANZO
 GERENTE PRODUCTO Y SISTEMAS
 PERFORATING PROJECTS MANAGER



REGISTERED DATA SHEET PERFORATING SYSTEM EVALUATION, API RP 19B SECTION 1

Service Company Available to all Design Number _____ Explosive Weight 6.5 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 2" RTTG, HMX Max. Temp, °F 400 1 hr _____ 3 hr _____ 24 hr _____ 100 hr _____ 200 hr
 Charge Name 2" RTG, HMX (DSC 03-02-19) Maximum Pressure Rating 20.000 psi, Carrier Material Steel
 Manufacturer Charge Part No. RT 36 H Date of Manufacture Feb 06th 2003 Shot Density Tested _____ 6 _____ Shots/ft
 Gun Type Retrievable Trough Tubing Gun, 6 SPF 60° Recommended Minimum ID for Running _____ * _____ in.
 Phasing Tested 60 degrees, Firing Order X Top Down, _____ Bottom Up Available Firing Mode _____ Selective, _____ Simultaneous
 Debris Description N/A Debris Weight N/A gm/charge, Debris N/A in³/charge
 Remarks * Gun OD after shooting in liquid is 2.17In., in air 2.23In.

SECTION 1 - CONCRETE TARGET

Casing Data 2 7/8" OD, Weight 6.4 lb/ft, L-80 API Grade, Date of Section 1 Test March 10th 2003
 Target Data 54 1/2" OD, Amount of Cement 3570 lb., Amount of Sand 7140 lb., Amount of Water 1856 lb.
 Date of Compressive Strength Test March 10th 2003, Briquette Compressive Strength 5531 psi, Age of Target 31 days

Shot No.	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10	No. 11	
Clearance, in.....	0.00	0.095	0.315	0.440	0.315	0.095	0.00	0.095	0.315	0.440	0.315	
Casing Hole Diameter, Short Axis, in..	0.202	0.190	0.202	0.205	0.192	0.202	0.192	0.194	0.180	0.210	0.215	
Casing Hole Diameter, Long Axis, in. .	0.204	0.220	0.209	0.223	0.198	0.223	0.195	0.196	0.200	0.224	0.225	
Average Casing Hole Diameter, in.....	0.203	0.205	0.206	0.214	0.195	0.213	0.194	0.195	0.190	0.217	0.220	
Total Depth, in.	20.723	19.723	20.723	18.973	18.973	18.223	18.223	18.473	19.535	19.723	19.598	
Burr Height, in.....	0.028	0.024	0.039	0.053	0.029	0.031	0.049	0.032	0.029	0.031	0.051	
Shot No.	No. 12	No. 13	No. 14	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20	No. 21	No. 22	Average
Clearance, in.....	0.095	0.00	0.095	0.315	0.440	0.315	0.095	0.00	0.095			0.194
Casing Hole Diameter, Short Axis, in..	0.204	0.206	0.212	0.205	0.223	0.210	0.207	0.210	0.196			0.203
Casing Hole Diameter, Long Axis, in. .	0.228	0.216	0.218	0.216	0.230	0.212	0.213	0.215	0.230			0.215
Average Casing Hole Diameter, in.....	0.216	0.211	0.215	0.211	0.227	0.211	0.210	0.213	0.213			0.209
Total Depth, in.	16.473	21.723	19.973	18.973	18.223	19.473	18.473	19.973	18.223			19.219
Burr Height, in.....	0.030	0.028	0.035	0.038	0.049	0.020	0.032	0.053	0.021			0.035

WITNESSING INFORMATION

Date of Notice of Intent to Test: Jan 03rd 2003 Witnessed by: [Signature] Smirnov (API Certified)
 Other Activities Witnessed: Target Pouring _____ Briquette: Preparation _____ Testing X Burr Height Measurement X Samples Taken: Concrete X Casing X

CERTIFICATION

I certify that these tests were made according to the procedures as outlined in API RP 19B: Recommended Practices for Evaluation of Well Perforators, First Edition, November 2000. All of the equipment used in these tests, such as the guns, jet charges detonator cord, etc., was standard equipment with our company for the use in the gun being tested and was not changed in any manner for the test. Furthermore, the equipment was chosen at random from stock and therefore will be substantially the same as the equipment, which would be furnished to perforate a well for any operator. The American Petroleum Institute neither endorses these test results nor recommends the use of the perforator system described.

X CERTIFIED BY DARIO E. LANZIO Perforating Projects Manager 03/10/03 Explosivos Tecnicos Argentinos S.A. Ruta 25Km.13 Pilar- Bs.As. Argentina
 _____ RECERTIFIED GERENTE PRODUCCION SISTEMAS PERFORATING PROJECTS MANAGER (Title) (Date) (Company) (Address)



REGISTERED DATA SHEET PERFORATING SYSTEM EVALUATION, API RP 19B SECTION 1

Service Company Available to SCHLUMBERGER Design Number
Gun OD & Trade Name 2" Retrievable Through Tubing Gun, UltraJet 2006 HMX
Charge Name UltraJet 2006, HMX (DSC 04-10-54)
Manufacturer Charge Part No. P447623 Date of Manufacture October 28th 2004
Gun Type Retrievable Through Tubing Gun, 6 SPF 60°
Phasing Tested 60 degrees, Firing Order X Top Down, Bottom Up
Debris Description N/A
Remarks * Gun OD after shooting in liquid is 2.17 in., in air 2.23 in.

SECTION 1 - CONCRETE TARGET

Casing Data 3 1/2" OD, Weight 9.2 lb/ft, L-80 API Grade, Date of Section 1 Test December 20th 2004
Target Data 45" OD, Amount of Cement 2450 lb., Amount of Sand 6050 lb., Amount of Water 1275 lb.
Date of Compressive Strength Test December 21st 2004, Briquette Compressive Strength 6050 psi, Age of Target 32 days

Table with columns: Shot No., Clearance, in., Casing Hole Diameter, Short Axis, in., Casing Hole Diameter, Long Axis, in., Average Casing Hole Diameter, in., Total Depth, in., Burr Height, in., No. 1-20, No. 21, No. 22, Average

WITNESSING INFORMATION

Date of Notice of Intent to Test: November 15th 2004 Witnessed by: J. Smimoff (API Certified)
Other Activities Witnessed: Target Pouring, Briquette: Preparation, Testing, Burr Height Measurement, Samples Taken: Concrete, Casing

CERTIFICATION

I certify that these tests were made according to the procedures as outlined in API RP 19B: Recommended Practices for Evaluation of Well Perforators, First Edition, November 2000. All of the equipment used in these tests, such as the guns, jet charges detonator cord, etc., was standard equipment with our company for the use in the gun being tested and was not changed in any manner for the test.

X CERTIFIED BY E. W. S. A. Perforating Projects Manager Dec 21st 2004 Explosivos Tecnol6gicos Argentinos S.A. Ruta 25Km.13 Pilar- Bs. As. Argentina
RECEIVED BY J. A. R. S. A. Perforating Projects Manager (Title) (Date) (Company) (Address)