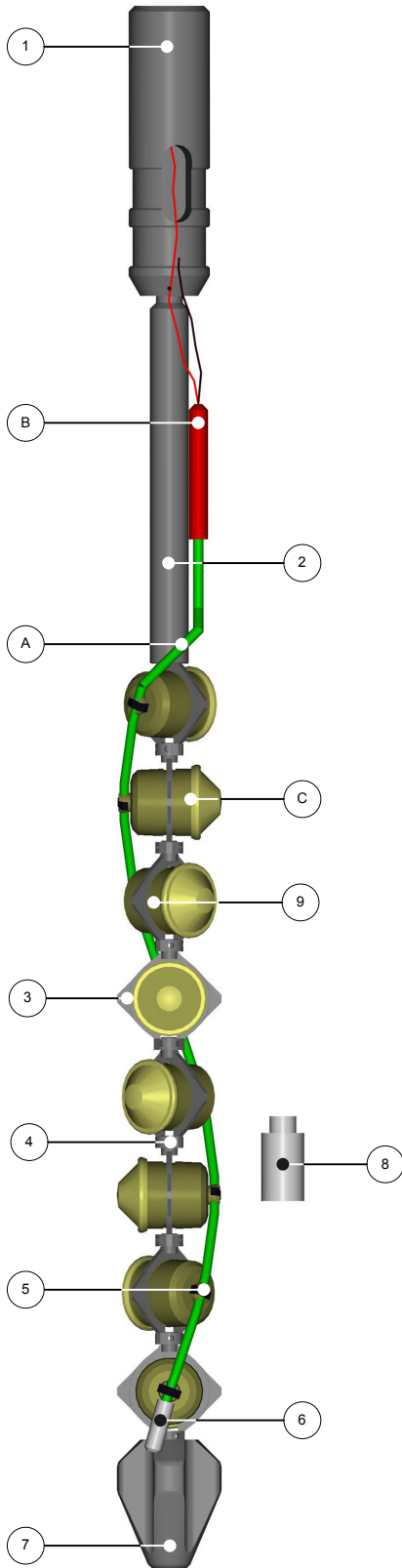


THROUGH TUBING GUN SYSTEM

1 1 1/16" & 2 1/8" Fully Expendable Through
Tubing Gun 6 SPF 45°/60° - 4 SPF 90°

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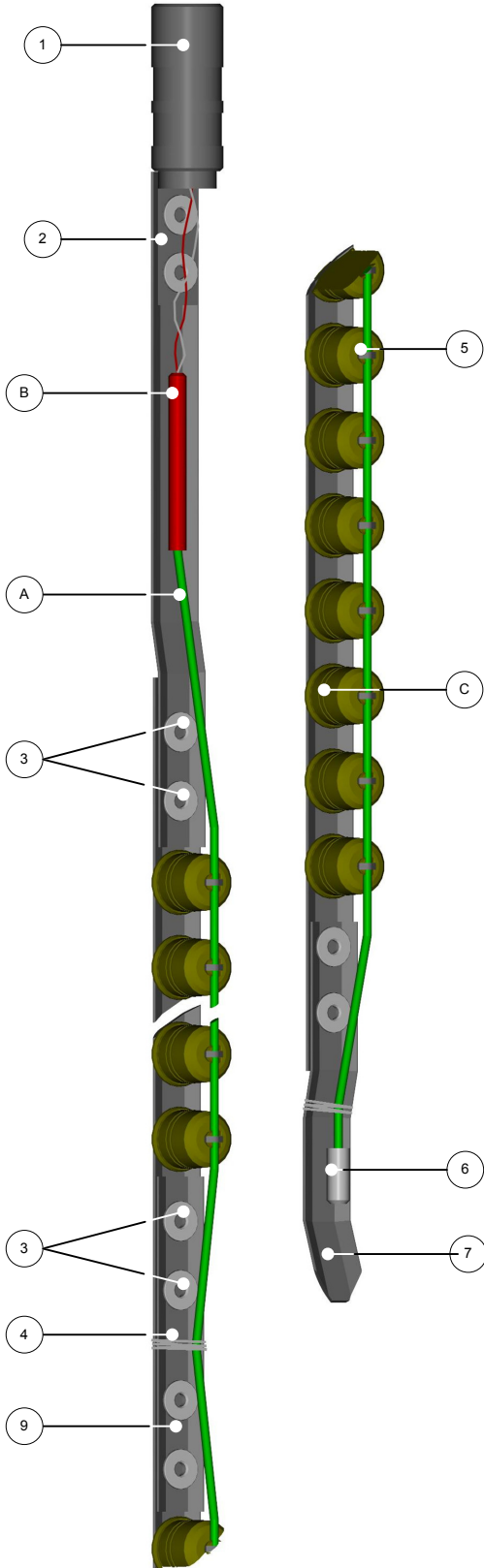
ITEM	Part Nbr.	DESCRIPTION
1	ETG-1688-001	1 1 1/16" & 2 1/8" Top Sub, Adapts to go Firing head.
2	ETG-1688-202	12" Extension
3	3107-01	1 1 1/16" 6 SPF 45°/60° Low Debris Link
	3007-01	2 1/8" 6 SPF 45°/60° Low Debris Link
4	3008-01	SS Connection Pin
5	3009-00	1 1 1/16" Detonating Cord Clip
	3009-NG	2 1/8" Next Generation Detonating Cord Clip
6	ETG-1688-046	60 Detonating Cord End Cover
	ETG-1688-047	80 Detonating Cord End Cover
7	3112-00	1 1 1/16" Expendable Bottom Nose
	3012-00	2 1/8" Expendable Bottom Nose
8	3015-00	1 1 1/16" & 2 1/8" 4 SPF 90° Adapter
9	3011-00	2 1/8" Retaining ring
	3111-00	1 1 1/16" Retaining ring
A		60 Grains HMX XHV Detonating Cord
		80 Grains HMX XHV Detonating Cord
B		Pressure resistant Detonator
C	TG31HNG	1 1 1/16" Piranha Next Generation HMX
	TG30HNG	2 1/8" Piranha Next Generation HMX
	TG30HNGBH	2 1/8" Piranha Next Generation BH HMX

SYSTEM PRESSURE RATING 20,000 PSI

API RP 19B Certified

1 11/16" & 2 1/8" Semi Expendable Through Tubing Gun, 4 & 6 SPF 0°

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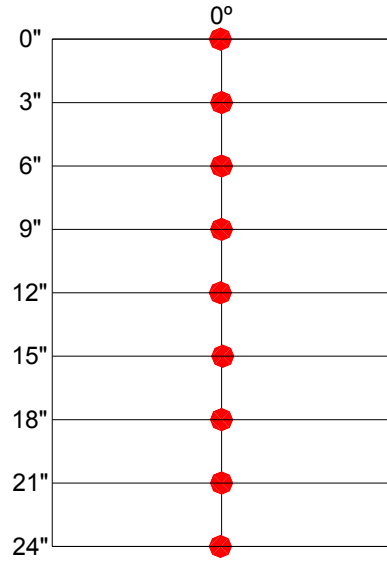
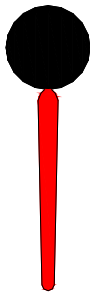
ITEM	Part Nbr.	DESCRIPTION
1	ETG-1688-101	1 11/16" & 2 1/8" Top Sub, adapts to GO firing head
2	ETG-1688-102	12" Extension
3	ETG-1688-103	UNEF 5/8" Bolt
4	ETG-1688-SZC	Nylon seizing cord
5	3009-00	1 11/16" Detcord Clip (Provided w/charges)
	3009-NG	2 1/8" Detcord Clip (Provided w/charges)
6	ETG-1688-046	60 Detonating cord end cover
	ETG-1688-047	80 Detonating cord end cover
7	ETG-1688-120	1 11/16" Bottom nose
	ETG-1688-121	1 11/16" Bottom nose for mag. Desc.
	ETG-2125-120	2 1/8" Bottom nose
	ETG-2125-121	2 1/8" Bottom nose for mag. Desc.
8	ETG-1688-002	1 11/16"-2 1/8" Strip 12 ft. 6 SPF
	ETG-1688-003	1 11/16"-2 1/8" Strip 6 ft. 6 SPF
	ETG-1688-004	1 11/16"-2 1/8" Strip 3 ft. 6 SPF
	ETG-1688-005	1 11/16"-2 1/8" Strip 12 ft. 4 SPF
	ETG-1688-006	1 11/16"-2 1/8" Strip 6 ft. 4 SPF
	ETG-1688-007	1 11/16"-2 1/8" Strip 3 ft. 4 SPF
9	ETG-1688-060	Tandem 6 SPF
	ETG-1688-061	Tandem 4 SPF
A		60 Grains High Velocity Detonating cord
		80 Grains High Velocity Detonating cord
B		Pressure resistat detonator
C	TG33HNG	1 11/16" Piranha Next Generation Threaded Cap, HMX
	TG32HNG	2 1/8" Piranha Next Generation, HMX

SYSTEM PRESSURE RATING 20,000 PSI

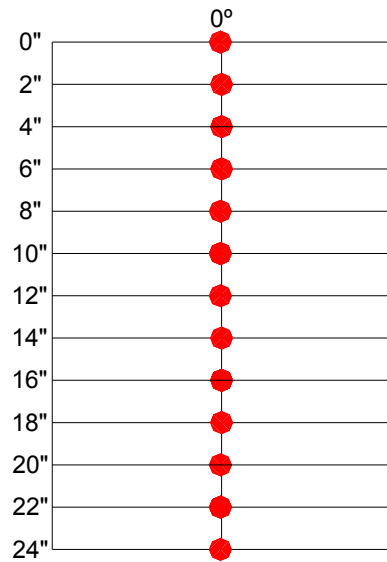
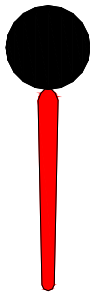
API RP 19B Certified

1 11/16" & 2 1/8" Semi Expendable Through
Tubing Gun, 4 & 6 SPF 0°

4 SPF 0°

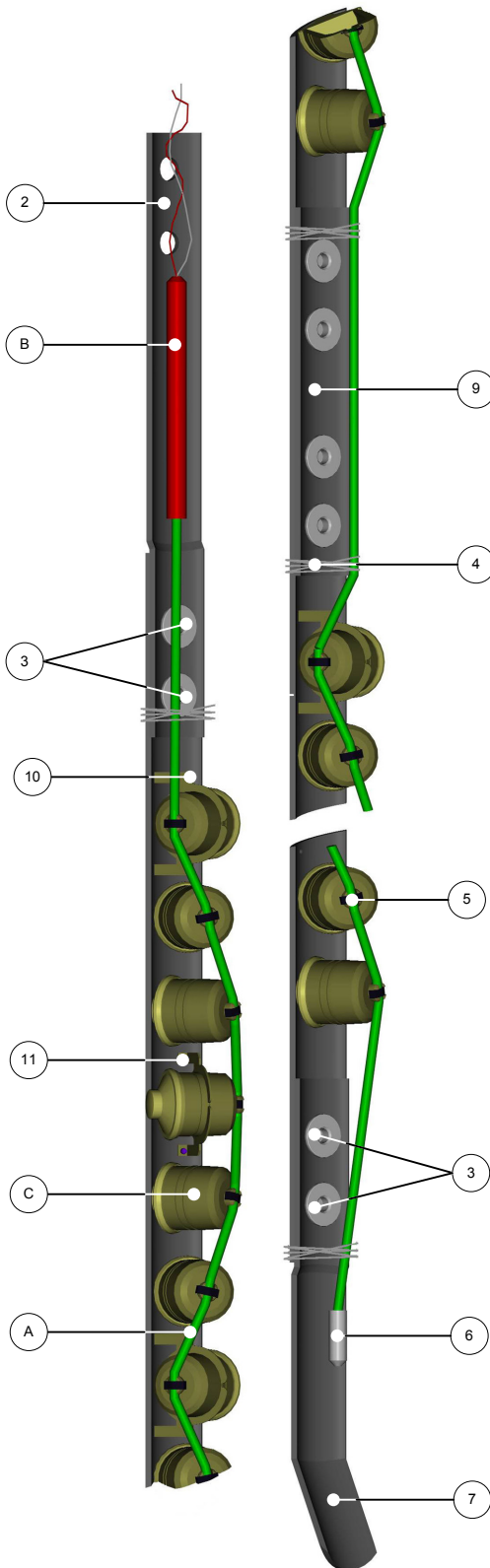


6 SPF 0°



2 1/8" Semi Expendable Through Tubing Gun Zigzag 45° 6 SPF

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ITEM	Part Nbr.	DESCRIPTION
2	ETG-1688-102	12" Extension
3	ETG-1688-103	UNEF 5/8" Bolt
4	ETG-1688-SZC	Nylon seizing cord
5	3009-NG	2 1/8" NG Detcord Clip (Provided w/charges)
6	ETG-1688-046	60 Detonating cord end cover
7	ETG-1688-047	80 Detonating cord end cover
7	ETG-2125-120	2 1/8" Bottom nose
7	ETG-2125-121	2 1/8" Bottom nose for mag. Desc.
8	ETG-2125-008	2 1/8" ZZ Strip 10 ft. 6 SPF
8	ETG-2125-009	2 1/8" ZZ Strip 7 ft. 6 SPF
9	ETG-1688-060	Tandem 6 SPF
10	ETG-2125-014	2 1/8" ZZ Retainer
11	ETG-2125-015	SS Pop Rivet
A		60 Grains High Velocity Detonating cord
B		80 Grains High Velocity Detonating cord
C		Pressure resistat detonator
C	TG32HNG	2 1/8" Piranha Next Generation Threaded cap

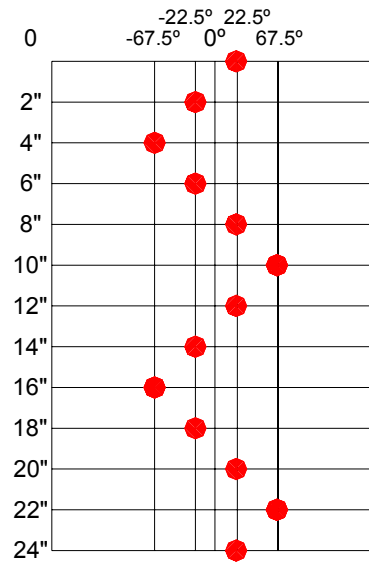
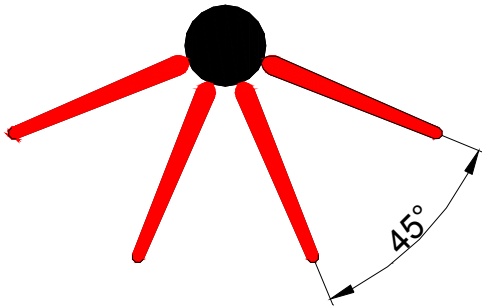
SYSTEM PRESSURE RATING 20,000 PSI

API RP 19B Certified

2 1/8" Semi Expendable Through Tubing Gun
Zigzag 45° 6 SPF

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6 SPF 45°
Zig Zag



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

Service Company Available to ALL Design Number _____ Explosive Weight 9 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 1 11/16" Low Debris Link Max. Temp, °F 365 1 hr _____ 3 hr _____ 24 hr _____ 100 hr _____ 200 hr
 Charge Name 1 11/16" Piranha Next Generation, HMX (DSC 02-09-03) Maximum Pressure Rating 20.000 psi, Carrier Material Steel
 Manufacturer Charge Part No. TG31HNG Date of Manufacture Sept 3rd 2002 Shot Density Tested _____ 6 _____ Shots/ft
 Gun Type Fully Expendable Trough Tubing, Low Debris Link 45° 6 SPF Recommended Minimum ID for Running _____ 1.78 _____ in.
 Phasing Tested 45 degrees, Firing Order X Top Down, _____ Bottom Up Available Firing Mode _____ Selective, _____ X _____ Simultaneous
 Debris Description Steel chips Debris Weight _____ 110 _____ gm/charge, Debris _____ * _____ in³/charge
 Remarks * Debris fill in 4 1/2" 11.6#, 5 1/2" 17# casing is 0.113, 0.075

SECTION 1 - CONCRETE TARGET

Casing Data 4 1/2" OD, Weight 11.6 lb/ft, L-80 API Grade, Date of Section 1 Test Nov 13th 2002
 Target Data 56.25" OD, Amount of Cement 3780 lb., Amount of Sand 7560 lb., Amount of Water 1965 lb.
 Date of Compressive Strength Test Nov 12th 2002, Briquette Compressive Strength 7837 psi, Age of Target 36 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	0.164	0.788	1.799	2.313	1.799	0.788	0.164	0	0.164	0.788
Casing Hole Diameter, Short Axis, in.	0.240	0.219	0.232	0.212	0.245	0.194	0.190	0.215	0.222	0.205	0.226
Casing Hole Diameter, Long Axis, in.	0.245	0.255	0.258	0.265	0.273	0.200	0.205	0.215	0.225	0.214	0.226
Average Casing Hole Diameter, in.	0.243	0.237	0.245	0.239	0.259	0.197	0.198	0.215	0.224	0.210	0.226
Total Depth, in.	15.270	17.270	14.520	15.770	18.270	17.645	17.520	LOST	17.270	16.770	17.645
Burr Height, in.	0.030	0.015	0.040	0.067	0.045	0.013	0.050	0.030	0.013	0.070	0.011

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.	1.799	2.313	1.799	0.788	0.164	0	0.164	0.788	1.799			0.909
Casing Hole Diameter, Short Axis, in.	0.220	0.190	0.184	0.175	0.190	0.195	0.228	0.228	0.219			0.211
Casing Hole Diameter, Long Axis, in.	0.222	0.201	0.192	0.195	0.193	0.206	0.240	0.232	0.230			0.225
Average Casing Hole Diameter, in.	0.221	0.196	0.188	0.185	0.192	0.201	0.234	0.230	0.225			0.218
Total Depth, in.	16.770	14.895	16.270	17.020	15.270	16.270	15.770	17.270	16.270			16.513
Burr Height, in.	0.013	0.010	0.019	0.028	0.035	0.025	0.028	0.013	0.017			0.029

WITNESSING INFORMATION

Date of Notice of Intent to Test: April 22th 2002 Witnessed by: Juan C. Valladares
 Other Activities Witnessed: Target Pouring _____ Briquette: Preparation _____ Testing X Burr Height Measurements 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 _____ Perforating Projects Manager Nov 15th 2002 _____ E.T.A. S.A. _____ Ruta 25 Km 13 Pilar Bs. As. Argentina
 _____ RECERTIFIED _____ (Company Official) (Title) (Date) (Company) (Address)

E.T.A. S.A.
DARIO E. LATTANZIO
 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 9 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 1 11/6" Piranha Strip Gun
 Max. Temp, °F 365 1 hr 3 hr 24 hr 100 hr 200 hr
 Charge Name 1 11/16" Piranha Next Generation, HMX (DSC 02-09-03)
 Maximum Pressure Rating 20.000 psi, Carrier Material Steel
 Manufacturer Charge Part No. TG33HNG Date of Manufacture Sept 3rd 2002
 Shot Density Tested _____ 6 _____ Shots/ft
 Gun Type Trough Tubing Retrievable Strip Gun
 Recommended Minimum ID for Running _____ 1.78 _____ in.
 Phasing Tested 0 degrees, Firing Order X Top Down, _____ Bottom Up
 Available Firing Mode _____ Selective, _____ X _____ Simultaneous
 Debris Description Steel chips, Caps Retrieved With Strip
 Debris Weight 66 gm/charge, Debris _____ * _____ in³/charge
 Remarks * Debris fill in 4 1/2" 11.6#, 5 1/2" 17# casing is 0.075, 0.050 respectively per charge

SECTION 1 - CONCRETE TARGET

Casing Data 4 1/2" OD, Weight 11.6 lb/ft, L-80 API Grade, Date of Section 1 Test Nov 13th 2002
 Target Data 35.375" OD, Amount of Cement 1530 lb., Amount of Sand 3060 lb., Amount of Water 795 lb.
 Date of Compressive Strength Test Nov 12th 2002, Briquette Compressive Strength 8796 psi, Age of Target 36 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	0	0	0	0	0	0	0	0	0	0
Casing Hole Diameter, Short Axis, in..	0.210	0.225	0.220	0.224	0.220	0.220	0.212	0.219	0.230	0.230	0.230
Casing Hole Diameter, Long Axis, in. .	0.220	0.225	0.240	0.240	0.235	0.228	0.220	0.220	0.250	0.243	0.240
Average Casing Hole Diameter, in.	0.215	0.225	0.230	0.232	0.228	0.224	0.216	0.220	0.240	0.237	0.235
Total Depth, in.	20.143	16.268	16.518	16.768	19.268	17.018	17.768	18.018	17.768	18.768	19.268
Burr Height, in.....	0.012	0.005	0.020	0.018	0.010	0.018	0.012	0.008	0.030	0.030	0.050

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	0	0	0	0	0	0	0	0			0
Casing Hole Diameter, Short Axis, in..	0.220	0.217	0.220	0.215	0.230	0.223	0.215	0.220	0.234			0.222
Casing Hole Diameter, Long Axis, in. .	0.225	0.221	0.225	0.230	0.240	0.223	0.230	0.225	0.237			0.231
Average Casing Hole Diameter, in.	0.223	0.219	0.223	0.223	0.235	0.223	0.223	0.223	0.236			0.227
Total Depth, in.	20.268	19.768	17.268	18.268	19.768	18.768	18.018	17.518	16.768			18.199
Burr Height, in.....	0.015	0.019	0.020	0.030	0.012	0.014	0.008	0.010	0.000			0.017

WITNESSING INFORMATION

Date of Notice of Intent to Test: April 22th 2002 Witnessed by: Juan C. Valladares
 Other Activities Witnessed: Target Pouring _____ Briquette: Preparation _____ Testing X Burr Height Measurements 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 _____ Perforating Projects Manager NOV 15th 2002 E.T.A. S.A. Ruta 25 Km 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 14.5 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 2 1/8" Fully Expendable Low Debris Link, BH HMX Max. Temp, °F 400 1 hr 3 hr 24 hr 100 hr 200 hr
 Charge Name 2 1/8" Piranha Next Generation BH HMX (DSC 04-07-41) Maximum Pressure Rating 20,000 psi, Carrier Material Steel
 Manufacturer Charge Part No. TG 30HNGBH Date of Manufacture July 29th 2004 Shot Density Tested 6 Shots/ft
 Gun Type Retrievable Trough Tubing Gun, 6 SPF 45° Recommended Minimum ID for Running 2.25 in.
 Phasing Tested 45 degrees, Firing Order X Top Down, _____ Bottom Up Available Firing Mode _____ Selective, _____ Simultaneous
 Debris Description Case & Link: small steel chips; Steel cap breaks in two or three parts Debris Weight 165 gm/charge, Debris * in³/charge
 Remarks * Debris fill in 4 1/2" 11.6#: 5 1/2" 17#: 7" 32# casing is 0.172", 0.115", 0.074" respectively per charge.

SECTION 1 - CONCRETE TARGET

Casing Data 4 1/2" OD, Weight 11.6 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 31th 2004, Briquette Compressive Strength 6356 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>0.162</u>	<u>0.704</u>	<u>1.487</u>	<u>1.875</u>	<u>1.487</u>	<u>0.704</u>	<u>0.162</u>	<u>0.00</u>	<u>0.162</u>	<u>0.704</u>
Casing Hole Diameter, Short Axis, in.	<u>0.60</u>	<u>0.59</u>	<u>0.53</u>	<u>0.52</u>	<u>0.51</u>	<u>0.50</u>	<u>0.52</u>	<u>0.58</u>	<u>0.50</u>	<u>0.60</u>	<u>0.57</u>
Casing Hole Diameter, Long Axis, in.	<u>0.63</u>	<u>0.61</u>	<u>0.56</u>	<u>0.60</u>	<u>0.52</u>	<u>0.52</u>	<u>0.58</u>	<u>0.60</u>	<u>0.55</u>	<u>0.63</u>	<u>0.60</u>
Average Casing Hole Diameter, in.	<u>0.615</u>	<u>0.600</u>	<u>0.545</u>	<u>0.560</u>	<u>0.515</u>	<u>0.510</u>	<u>0.550</u>	<u>0.590</u>	<u>0.525</u>	<u>0.615</u>	<u>0.585</u>
Total Depth, in.	<u>6.501</u>	<u>8.751</u>	<u>8.251</u>	<u>7.001</u>	<u>7.251</u>	<u>7.001</u>	<u>6.001</u>	<u>8.501</u>	<u>8.001</u>	<u>6.501</u>	<u>7.501</u>
Burr Height, in.	<u>0.036</u>	<u>0.023</u>	<u>0.052</u>	<u>0.049</u>	<u>0.028</u>	<u>0.052</u>	<u>0.065</u>	<u>0.080</u>	<u>0.040</u>	<u>0.058</u>	<u>0.062</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>1.487</u>	<u>1.875</u>	<u>1.487</u>									<u>0.878</u>
Casing Hole Diameter, Short Axis, in.	<u>0.64</u>	<u>0.53</u>	<u>0.52</u>									<u>0.551</u>
Casing Hole Diameter, Long Axis, in.	<u>0.66</u>	<u>0.60</u>	<u>0.56</u>									<u>0.587</u>
Average Casing Hole Diameter, in.	<u>0.65</u>	<u>0.565</u>	<u>0.540</u>									<u>0.569</u>
Total Depth, in.	<u>7.251</u>	<u>8.001</u>	<u>5.571</u>									<u>7.305</u>
Burr Height, in.	<u>0.084</u>	<u>0.061</u>	<u>0.079</u>									<u>0.055</u>

WITNESSING INFORMATION

Date of Notice of Intent to Test: July 27th 2004 Witnessed by: J. Smirnoff (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 DANIEL E. LATTANZIO Perforating Projects Manager Sept 1st 2004 Explosivos Tecnológicos Argentinos S.A. Ruta 25Km.13 Pilar- Bs.As. Argentina
 _____ RECERTIFIED _____ (Title) _____ (Date) _____ (Company) _____ (Address)

DANIEL E. LATTANZIO
 PERFORATING PROJECTS MANAGER



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

Service Company Available to all _____ Design Number _____ Explosive Weight 14.5 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 2 1/8" Retrievable Zig Zag Strip Gun Max. Temp, °F 375 1 hr _____ 3 hr _____ 24 hr _____ 100 hr _____ 200 hr
 Charge Name 2 1/8" Piranha Next Generation Threaded cap (DSC 03-02-21) Maximum Pressure Rating 20.000 psi, Carrier Material Steel
 Manufacturer Charge Part No. TG32HNG Date of Manufacture Feb 7th 2003 Shot Density Tested _____ 6 _____ Shots/ft
 Gun Type Semi Expendable Trough Tubing Gun, Phased Strip 6 SPF +/-22.5° +/-67.5° Recommended Minimum ID for Running _____ 2.25 _____ in.
 Phasing Tested 45° degrees, Firing Order X Top Down, _____ Bottom Up Available Firing Mode _____ Selective, _____ Simultaneous
 Debris Description Case : Steel chips; Caps Retrieved w/Strip Debris Weight _____ 110 _____ gm/charge, Debris _____ * _____ in³/charge
 Remarks * Debris fill in 4 1/2" 11.6#, 5 1/2" 17# and 7" 32# Casing is 0.107", 0.073", 0.048" respectively per charge.

SECTION 1 - CONCRETE TARGET

Casing Data 5 1/2" OD, Weight 17 lb/ft, L-80 API Grade, Date of Section 1 Test March 10th 2003
 Target Data 70" OD, Amount of Cement 5780 lb., Amount of Sand 11560 lb., Amount of Water 3006 lb.
 Date of Compressive Strength Test March 10th 2003, Briquette Compressive Strength 5379 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>0.043</u>	<u>0.043</u>	<u>0.432</u>	<u>0.043</u>	<u>0.043</u>	<u>0.432</u>	<u>0.043</u>	<u>0.043</u>	<u>0.432</u>	<u>0.043</u>	<u>0.043</u>	
Casing Hole Diameter, Short Axis, in..	<u>0.305</u>	<u>0.306</u>	<u>0.330</u>	<u>0.290</u>	<u>0.295</u>	<u>0.290</u>	<u>0.301</u>	<u>0.292</u>	<u>0.276</u>	<u>0.294</u>	<u>0.308</u>	
Casing Hole Diameter, Long Axis, in. .	<u>0.316</u>	<u>0.308</u>	<u>0.332</u>	<u>0.302</u>	<u>0.306</u>	<u>0.308</u>	<u>0.316</u>	<u>0.326</u>	<u>0.281</u>	<u>0.296</u>	<u>0.311</u>	
Average Casing Hole Diameter, in.....	<u>0.311</u>	<u>0.307</u>	<u>0.331</u>	<u>0.296</u>	<u>0.301</u>	<u>0.299</u>	<u>0.309</u>	<u>0.309</u>	<u>0.279</u>	<u>0.295</u>	<u>0.310</u>	
Total Depth, in.	<u>31.567</u>	<u>34.567</u>	<u>31.067</u>	<u>34.200</u>	<u>31.817</u>	<u>29.692</u>	<u>31.067</u>	<u>34.317</u>	<u>29.567</u>	<u>32.067</u>	<u>31.442</u>	
Burr Height, in.....	<u>0.021</u>	<u>0.039</u>	<u>0.048</u>	<u>0.049</u>	<u>0.028</u>	<u>0.054</u>	<u>0.041</u>	<u>0.034</u>	<u>0.040</u>	<u>0.046</u>	<u>0.072</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>0.432</u>	<u>0.043</u>	<u>0.043</u>	<u>0.432</u>	<u>0.043</u>	<u>0.043</u>	<u>0.432</u>	<u>0.043</u>	<u>0.043</u>			<u>0.160</u>
Casing Hole Diameter, Short Axis, in..	<u>0.310</u>	<u>0.304</u>	<u>0.300</u>	<u>0.266</u>	<u>0.323</u>	<u>0.321</u>	<u>0.288</u>	<u>0.294</u>	<u>0.319</u>			<u>0.301</u>
Casing Hole Diameter, Long Axis, in. .	<u>0.330</u>	<u>0.306</u>	<u>0.329</u>	<u>0.292</u>	<u>0.324</u>	<u>0.323</u>	<u>0.304</u>	<u>0.302</u>	<u>0.327</u>			<u>0.312</u>
Average Casing Hole Diameter, in.....	<u>0.320</u>	<u>0.305</u>	<u>0.315</u>	<u>0.279</u>	<u>0.324</u>	<u>0.322</u>	<u>0.296</u>	<u>0.298</u>	<u>0.323</u>			<u>0.306</u>
Total Depth, in.	<u>27.567</u>	<u>32.442</u>	<u>29.817</u>	<u>30.504</u>	<u>31.567</u>	<u>32.817</u>	<u>30.442</u>	<u>30.692</u>	<u>30.567</u>			<u>31.389</u>
Burr Height, in.....	<u>0.035</u>	<u>0.033</u>	<u>0.083</u>	<u>0.034</u>	<u>0.055</u>	<u>0.057</u>	<u>0.013</u>	<u>0.017</u>	<u>0.057</u>			<u>0.043</u>

WITNESSING INFORMATION

Date of Notice of Intent to Test: Jan 03rd 2003 Witnessed by: J. Smirnov 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 DARIO E. MATTANZO Perforating Projects Manager 03/11/03 Explosivos Tecnológicos Argentinos S.A. Ruta 25Km.13 Pilar- Bs.As. Argentina
 _____ RECERTIFIED _____ (Title) _____ (Date) _____ (Company) _____ (Address)

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

Service Company Exclusively for Schlumberger Design Number _____ Explosive Weight 14.5 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 2 1/8" Low Debris Link Max. Temp, °F 375 1 hr _____ 3 hr _____ 24 hr _____ 100 hr _____ 200 hr
 Charge Name 2 1/8" Cerámica, HMX (DSC 02-12-20) Maximum Pressure Rating 20.000 psi, Carrier Material Steel
 Manufacturer Charge Part No. H447619 Date of Manufacture Dec 17th 2002 Shot Density Tested _____ 6 _____ Shots/ft
 Gun Type Fully Expendable Trough Tubing Gun, Link 6 SPF 45° Recommended Minimum ID for Running _____ 2.25 _____ in.
 Phasing Tested 45 degrees, Firing Order X Top Down, _____ Bottom Up Available Firing Mode _____ Selective, _____ X _____ Simultaneous
 Debris Description Case and Link: Steel chips; Ceramic cap: Fine granules Debris Weight 155 gm/charge, Debris _____ * _____ in³/charge
 Remarks * Debris fill in 4 1/2" 11.6#, 5 1/2" 17# and 7" 32# Casing is 0.145", 0.098", 0.063" Respectively per charge.

SECTION 1 - CONCRETE TARGET

Casing Data 5 1/2" OD, Weight 17 lb/ft, L-80 API Grade, Date of Section 1 Test Jan 21st 2003
 Target Data 74" OD, Amount of Cement 5710 lb., Amount of Sand 11420 lb., Amount of Water 2969 lb.
 Date of Compressive Strength Test Jan 21st 2003, Briquette Compressive Strength 7212 psi, Age of Target 32 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	0.201	0.955	2.159	2.769	2.159	0.955	0.201	0.00	0.201	0.955	
Casing Hole Diameter, Short Axis, in..	0.26	0.30	0.268	0.223	0.211	0.318	0.297	0.301	0.286	0.245	0.236	
Casing Hole Diameter, Long Axis, in. .	0.27	0.30	0.277	0.243	0.247	0.332	0.310	0.345	0.288	0.294	0.240	
Average Casing Hole Diameter, in.	0.265	0.300	0.273	0.233	0.229	0.325	0.304	0.323	0.287	0.270	0.238	
Total Depth, in.	28.675	29.800	27.300	30.300	26.800	27.050	29.425	27.550	29.050	31.300	28.800	
Burr Height, in.....	0.008	0.063	0.077	0.075	0.022	0.090	0.029	0.070	0.086	0.020	0.059	
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.....	2.159	2.769	2.159	0.955	0.201	0	0.201	0.955	2.159			1.106
Casing Hole Diameter, Short Axis, in..	0.250	0.327	0.322	0.302	0.290	0.262	0.238	0.258	0.301			0.275
Casing Hole Diameter, Long Axis, in. .	0.274	0.368	0.347	0.304	0.310	0.281	0.250	0.263	0.330			0.294
Average Casing Hole Diameter, in.	0.262	0.348	0.335	0.303	0.300	0.272	0.244	0.261	0.315			0.284
Total Depth, in.	29.050	27.050	30.300	28.300	28.800	25.300	31.050	27.550	23.800			28.363
Burr Height, in.....	0.063	0.068	0.046	0.070	0.062	0.081	0.048	0.058	0.070			0.058

WITNESSING INFORMATION

Date of Notice of Intent to Test: April 22th 2002 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 [Signature] Perforating Projects Manager Jan 31st 2003 Explosivos Tecnicos 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 SCHLUMBERGER Design Number _____ Explosive Weight 14.5 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 2 1/8" EZ4 Strip Gun Max. Temp, °F 365 1 hr _____ 3 hr _____ 24 hr _____ 100 hr _____ 200 hr
 Charge Name 2 1/8" Cerámica, HMX (DSC 02-08-44) Maximum Pressure Rating 20.000 psi, Carrier Material Steel
 Manufacturer Charge Part No. H447619 Date of Manufacture Aug 30th 2002 Shot Density Tested _____ 4 _____ Shots/ft
 Gun Type Fully Expendable Trough Tubing, Strip 0° 4 SPF Recommended Minimum ID for Running _____ 2.25 _____ in.
 Phasing Tested 0 degrees, Firing Order X Top Down, _____ Bottom Up Available Firing Mode _____ Selective, _____ X _____ Simultaneous
 Debris Description Case: Steel chips; Ceramic cap: Fine granules Debris Weight 158 gm/charge, Debris _____ * _____ in³/charge
 Remarks *Debris fill in 4 1/2" 11.6#, 5 1/2" 17# and 7" 32# casing is 0.147, 0.098, 0.063 Respectively per charge

SECTION 1 - CONCRETE TARGET

Casing Data 5 1/2" OD, Weight 17 lb/ft, L-80 API Grade, Date of Section 1 Test Nov 11th 2002
 Target Data 51.25" OD, Amount of Cement 3126 lb., Amount of Sand 6250 lb., Amount of Water 1625 lb.
 Date of Compressive Strength Test Nov 11th 2002, Briquette Compressive Strength 7274 psi, Age of Target 34 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	0	0	0	0	0	0	0	0	0	0	
Casing Hole Diameter, Short Axis, in..	0.265	0.290	0.280	0.270	0.280	0.280	0.300	0.290	0.294	0.292	0.320	
Casing Hole Diameter, Long Axis, in. .	0.270	0.305	0.310	0.280	0.310	0.280	0.300	0.310	0.300	0.296	0.320	
Average Casing Hole Diameter, in.	0.268	0.298	0.295	0.275	0.295	0.280	0.300	0.300	0.297	0.294	0.320	
Total Depth, in.	29.318*	23.818	29.068	26.443	28.818	27.568	24.318	26.068	25.568	28.443	25.943	
Burr Height, in.	0.020	0.020	0.025	0.018	0.042	0.030	0.022	0.012	0.024	0.038	0.033	
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	0	0									0
Casing Hole Diameter, Short Axis, in..	0.293	0.288	0.295									0.288
Casing Hole Diameter, Long Axis, in. .	0.303	0.292	0.320									0.300
Average Casing Hole Diameter, in.	0.298	0.290	0.308									0.294
Total Depth, in.	30.818	29.068	28.068									27.231
Burr Height, in.	0.042	0.050	0.018									0.028

Shot #1 is not considered for the average, distance between this shot and the top of the target was smaller than 12"

WITNESSING INFORMATION

Date of Notice of Intent to Test: April 22th 2002 Witnessed by: Juan C. Valladares
 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 _____ Perforating Projects Manager 15th Nov 2002 E.T.A. S.A. Ruta 25 Km 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 _____
 Gun OD & Trade Name 2 1/8" Low Debris Link
 Charge Name 2 1/8" Piranha Next Generation, HMX (DSC 02-12-22)
 Manufacturer Charge Part No. TG30HNG Date of Manufacture Dec 17th 2002
 Gun Type Fully Expendable Trough Tubing Gun, Link 6 SPF 45°
 Phasing Tested 45 degrees, Firing Order X Top Down, _____ Bottom Up
 Debris Description Case and Link: Steel chips Caps: Breaks in two ore three parts
 Remarks * Debris fill in 4 1/2" 11.6#, 5 1/2" 17# and 7" 32# Casing is 0.172", 0.115", 0.074" Respectively per charge.

Explosive Weight 14.5 gm, HMX powder, Case Material Steel
 Max. Temp, °F 375 1 hr _____ 3 hr _____ 24 hr _____ 100 hr _____ 200 hr
 Maximum Pressure Rating 20,000 psi, Carrier Material Steel
 Shot Density Tested _____ 6 _____ Shots/ft
 Recommended Minimum ID for Running _____ 2.25 _____ in.
 Available Firing Mode _____ Selective, _____ X _____ Simultaneous
 Debris Weight 165 gm/charge, Debris _____ * _____ in³/charge

SECTION 1 - CONCRETE TARGET

Casing Data 5 1/2" OD, Weight 17 lb/ft, L-80 API Grade, Date of Section 1 Test Jan 21st 2003
 Target Data 72" OD, Amount of Cement 5710 lb., Amount of Sand 11420 lb., Amount of Water 2969 lb.
 Date of Compressive Strength Test Jan 21st 2003, Briquette Compressive Strength 7132 psi, Age of Target 32 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	0.201	0.955	2.159	2.769	2.159	0.955	0.201	0.00	0.201	0.955
Casing Hole Diameter, Short Axis, in..	0.285	0.317	0.267	0.241	0.269	0.275	0.327	0.325	0.304	0.272	0.222
Casing Hole Diameter, Long Axis, in. .	0.288	0.330	0.268	0.268	0.269	0.300	0.366	0.360	0.323	0.284	0.256
Average Casing Hole Diameter, in.....	0.287	0.324	0.268	0.255	0.269	0.288	0.347	0.343	0.314	0.278	0.239
Total Depth, in.....	25.050	28.800	29.050	28.800	31.425	26.175	24.675	29.050	26.050	20.050	26.550
Burr Height, in.....	0.019	0.048	0.051	0.061	0.053	0.076	0.045	0.018	0.066	0.068	0.043

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.....	2.159	2.769	2.159	0.955	0.201	0.00	0.201	0.955	2.159			1.106
Casing Hole Diameter, Short Axis, in..	0.269	0.320	0.320	0.315	0.278	0.203	0.244	0.270	0.328			0.285
Casing Hole Diameter, Long Axis, in. .	0.270	0.328	0.324	0.336	0.289	0.232	0.248	0.273	0.330			0.295
Average Casing Hole Diameter, in.....	0.270	0.324	0.322	0.326	0.284	0.218	0.246	0.272	0.329			0.290
Total Depth, in.....	28.050	26.800	28.550	28.300	25.050	20.800	28.300	26.300	24.800			26.631
Burr Height, in.....	0.038	0.051	0.047	0.032	0.081	0.058	0.053	0.080	0.053			0.052

WITNESSING INFORMATION

Date of Notice of Intent to Test: April 22th 2002 Witnessed by: [Signature] Smirnoff (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 _____ Perforating Projects Manager Jan 31st 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 _____
 Gun OD & Trade Name 2 1/8" Piranha Strip Gun
 Charge Name 2 1/8" Piranha Next Generation Threaded Cap, HMX (DSC 02-12-21)
 Manufacturer Charge Part No. TG32HNG Date of Manufacture Dec 17th 2002
 Gun Type Semi Expendable Trough Tubing Strip Gun, 6 SPF 0°
 Phasing Tested 0 degrees, Firing Order X Top Down, _____ Bottom Up
 Debris Description Case: Steel Chips, Caps: Retrieved W/Strip
 Remarks * Debris fill in 4 1/2" 11.6#, 5 1/2" 17# and 7" 32# Casing is 0.113", 0.076", 0.049" respectively per charge.

Explosive Weight 14.5 gm, HMX powder, Case Material Steel
 Max. Temp, °F 375 1 hr _____ 3 hr _____ 24 hr _____ 100 hr _____ 200 hr
 Maximum Pressure Rating 20.000 psi, Carrier Material Steel
 Shot Density Tested _____ 6 _____ Shots/ft
 Recommended Minimum ID for Running _____ 2.25 _____ in.
 Available Firing Mode _____ Selective, _____ X _____ Simultaneous
 Debris Weight 113.5 gm/charge, Debris _____ * _____ in³/charge

SECTION 1 - CONCRETE TARGET

Casing Data 5 1/2" OD, Weight 17 lb/ft, L-80 API Grade, Date of Section 1 Test Jan 20th 2003
 Target Data 51.375" OD, Amount of Cement 2913 lb., Amount of Sand 5826 lb., Amount of Water 1515 lb.
 Date of Compressive Strength Test Jan 20th 2003, Briquette Compressive Strength 6989 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	0	0	0	0	0	0	0	0	0	0	
Casing Hole Diameter, Short Axis, in..	0.300	0.330	0.310	0.330	0.305	0.340	0.347	0.344	0.338	0.368	0.300	
Casing Hole Diameter, Long Axis, in. .	0.352	0.383	0.340	0.350	0.386	0.380	0.362	0.391	0.353	0.375	0.349	
Average Casing Hole Diameter, in.....	0.326	0.356	0.325	0.340	0.345	0.360	0.354	0.367	0.345	0.371	0.324	
Total Depth, in.	31.426	32.050	31.551	32.301	31.051	31.301	32.426	31.051	33.926	29.051	31.176	
Burr Height, in.....	0.060	0.080	0.051	0.069	0.051	0.085	0.053	0.047	0.032	0.035	0.054	
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	0	0	0	0	0	0	0	0			0
Casing Hole Diameter, Short Axis, in..	0.304	0.320	0.350	0.294	0.300	0.310	0.347	0.310	0.310			0.323
Casing Hole Diameter, Long Axis, in. .	0.318	0.355	0.355	0.298	0.360	0.330	0.350	0.340	0.330			0.353
Average Casing Hole Diameter, in.....	0.311	0.337	0.352	0.296	0.330	0.320	0.348	0.325	0.320			0.338
Total Depth, in.	29.426	30.801	29.801	30.801	30.051	31.301	33.426	31.301	28.051			31.113
Burr Height, in.....	0.029	0.033	0.042	0.021	0.033	0.052	0.058	0.065	0.079			0.049

WITNESSING INFORMATION

Date of Notice of Intent to Test: April 22th 2002 Witnessed by: J. Smirnoff (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 _____ Perforating Projects Manager Jan 31st 2003 Explosivos Tecnologicos Argentinos S.A. Ruta 25Km.13 Pilar- Bs.As. Argentina
 _____ RECERTIFIED _____ 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 27 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 2 1/2" Through Tubing Gun DP HMX Max. Temp, °F 375 1 hr _____ 3 hr _____ 24 hr _____ 100 hr _____ 200 hr
 Charge Name 2 1/2" Piranha Next Generation DP (DSC 06-01-30) Maximum Pressure Rating 15,000 psi, Carrier Material Steel
 Manufacturer Charge Part No. TG51HNG Date of Manufacture Jan 14th 2006 Shot Density Tested _____ 5 _____ Shots/ft
 Gun Type Through Tubing Gun, Low Debris Link 5 SPF 60° Recommended Minimum ID for Running _____ 2.75 _____ in.
 Phasing Tested 60° degrees, Firing Order X Top Down, _____ Bottom Up Available Firing Mode _____ Selective, _____ X _____ Simultaneous
 Debris Description Steel Chips Debris Weight _____ gm/charge, Debris _____ in³/charge
 Remarks _____

SECTION 1 - CONCRETE TARGET

Casing Data 4 1/2" OD, Weight 11.6 lb/ft, L-80 API Grade, Date of Section 1 Test June 05th 2006
 Target Data 91 OD, Amount of Cement 9400 lb., Amount of Sand 18795 lb., Amount of Water 4890 lb.
 Date of Compressive Strength Test June 06th 2006, Briquette Compressive Strength 6606 psi, Age of Target 35 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>0.000</u>	<u>0.267</u>	<u>1.017</u>	<u>1.500</u>	<u>1.017</u>	<u>0.267</u>	<u>0.000</u>	<u>0.267</u>	<u>1.017</u>	<u>1.500</u>	<u>1.017</u>
Casing Hole Diameter, Short Axis, in.....	<u>0.380</u>	<u>0.370</u>	<u>0.360</u>	<u>0.340</u>	<u>0.380</u>	<u>0.350</u>	<u>0.340</u>	<u>0.390</u>	<u>0.420</u>	<u>0.390</u>	<u>0.360</u>
Casing Hole Diameter, Long Axis, in.....	<u>0.390</u>	<u>0.390</u>	<u>0.380</u>	<u>0.360</u>	<u>0.400</u>	<u>0.400</u>	<u>0.360</u>	<u>0.410</u>	<u>0.430</u>	<u>0.410</u>	<u>0.380</u>
Average Casing Hole Diameter, in.....	<u>0.385</u>	<u>0.380</u>	<u>0.370</u>	<u>0.350</u>	<u>0.390</u>	<u>0.375</u>	<u>0.350</u>	<u>0.400</u>	<u>0.425</u>	<u>0.400</u>	<u>0.370</u>
Total Depth, in.....	<u>30.255</u>	<u>39.005</u>	<u>37.255</u>	<u>41.005</u>	<u>34.255</u>	<u>35.755</u>	<u>33.505</u>	<u>37.005</u>	<u>32.505</u>	<u>33.755</u>	<u>39.755</u>
Burr Height, in.....	<u>0.030</u>	<u>0.050</u>	<u>0.015</u>	<u>0.037</u>	<u>0.014</u>	<u>0.019</u>	<u>0.030</u>	<u>0.025</u>	<u>0.018</u>	<u>0.021</u>	<u>0.028</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>0.267</u>	<u>0.000</u>	<u>0.267</u>	_____	_____	_____	_____	_____	_____	_____	_____	<u>0.600</u>
Casing Hole Diameter, Short Axis, in.....	<u>0.410</u>	<u>0.360</u>	<u>0.370</u>	_____	_____	_____	_____	_____	_____	_____	_____	<u>0.373</u>
Casing Hole Diameter, Long Axis, in.....	<u>0.430</u>	<u>0.380</u>	<u>0.370</u>	_____	_____	_____	_____	_____	_____	_____	_____	<u>0.392</u>
Average Casing Hole Diameter, in.....	<u>0.420</u>	<u>0.370</u>	<u>0.370</u>	_____	_____	_____	_____	_____	_____	_____	_____	<u>0.383</u>
Total Depth, in.....	<u>36.255</u>	<u>34.505</u>	<u>38.005</u>	_____	_____	_____	_____	_____	_____	_____	_____	<u>35.926</u>
Burr Height, in.....	<u>0.031</u>	<u>0.016</u>	<u>0.012</u>	_____	_____	_____	_____	_____	_____	_____	_____	<u>0.025</u>

WITNESSING INFORMATION

Date of Notice of Intent to Test: May 2nd 2006 Witnessed by: J. Smirnov 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] Perforating Projects Manager June 08th 2006 Explosivos Tecnologicos Argentinos S.A. Ruta 25Km.13 Pilar- Bs.As. Argentina
 _____ RECERTIFIED _____ (Company Official) (Title) (Date) (Company) (Address)