

## ARRAY SONIC EVALUATION TOOL



### PURPOSE:

The ASET provides quality broadband compressional measurement (in both hard and soft rock environments) in cased holes and provides analysis of the zone isolation achieved by cementing services. The most common application for the ASET tool is to identify 2 shallow, gas-bearing zones and better evaluation of Coal Bed Methane.

### ADVANTAGES:

- Ability to run CBL/CCL/GR/CNL/Sonic in one string.
- Monopole Sonic specifically designed to be run from a cased hole truck for a cased hole environment.
- Field copy generated day of operation and placed on dataportal for client the next morning.
- More timely and affordable method for information evaluation and cement bond analysis.



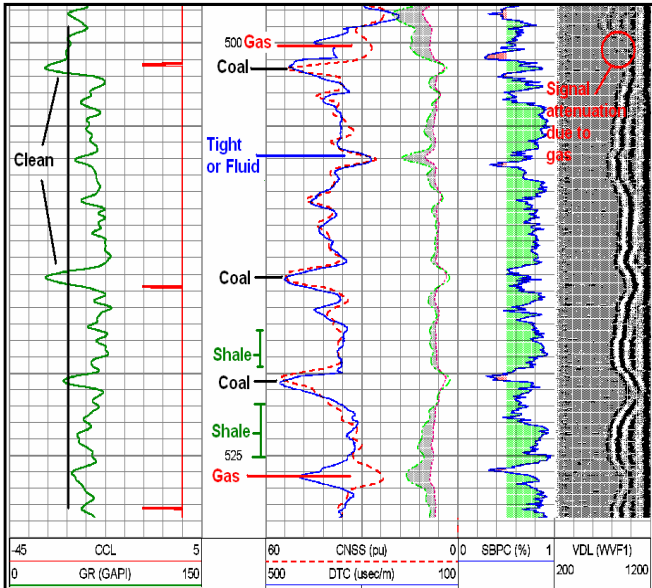
### SPECIFICATIONS

#### General information

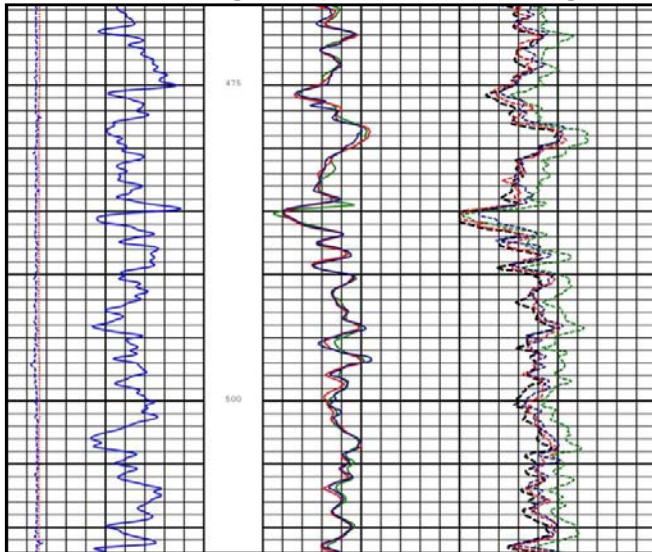
<b>Temperature:</b> 300° F	<b>Pressure:</b> 20000 psi
<b>Diameter:</b> 3 1/8"	<b>Length:</b> 20.4 ft.
<b>Tool Weight:</b> 271 lbs., 123 kg	<b>Supply Voltage:</b> 120 VDC
<b>Power/Current:</b> 135 mA (+/- 5)	<b>Receivers:</b> Piezoelectric crystals
<b>Measure Points:</b>	<b>Borehole Environment:</b>
3ft Amp: 90.2"	Brine
5ft VDL: 102.2"	Oil
GR: 209.7"	Fresh Water
CCL: 228.8"	Drilling Mud
	Max. Casing: 9.625"
<b>Array Receivers (RX1 through RX8):</b> 72.22" to 93.22" in 3" intervals	

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### ASET Log




### ASET Log Compared with OH Log



Blue - OH Sonic/ Compensated Neutron

Red - ASET/CNL in Open Hole

Green - ASET/CNL in Cased Hole

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)	
CHD	4.45		CHD-TITAN (1) Titan 1-7/16 Cable head	1.00	1.44	2.20	
CENT	3.45		CENT-CSS (CSS-T) Computer Sonics 3 1/8 Centrilizer	2.75	2.44	15.00	
CCL	0.00		CCL-CCL-ARRAY (ARRAY-CCL01) ARRAY COLLAR LOCATOR	1.24	3.11	11.02	
GR	-1.69		GR-GR-ARRAY (ARRAY-GR01) TUCKER ARRAY GR	6.02	3.11	17.64	
WVFS8	-6.43						
WVFS7	-6.92						
WVFS6	-7.41						
WVFS5	-7.94						
WVFS4	-8.43						
WVFS3	-8.92						
WVFS2	-9.42						
WVFS1	-9.91						
WVF5FT	-10.37						
WVF3FT	-11.52						
				ARRAY-ARRAY-SONIC (ARRAY-01) TUCKER ARRAY SONIC	12.40	3.11	187.39
CENT	-18.96		CENT-CSS (CSS-B) Computer Sonics 3 1/8 Centrilizer	2.75	2.44	15.00	
KNUCKLE	-21.71		TITAN Knuckle Joint	1.31	1.69	4.41	
			CNT-CSS-CNT (CSS-1028) CSS 1 1 1/16 Compensated Neutron	6.50	1.69	6.61	
CNLS	-28.24						
NCAL	-28.45						
CNSS	-28.65						

Dataset: Tucker Array Sonic  
 Total Length: 33.97 ft  
 Total Weight: 259.27 lb  
 O.D.: 3.11 in