



FRUITFUL BOUGH
ENERGY

SURFACE LOGGING BROCHURE

ABOUT US

Fruitful Bough Energy is an emerging player in Industrial IoT Monitoring Solutions and data reporting, notably in the Oil & Gas, Energy & Utilities Industries.

We provide reliable and effective services to our clients across the entire value chain. We are capable of providing tailored solutions that adapt to the client's needs.



ABOUT US

Fruitful Bough Energy's exclusive partnership with SensorsDrilling C.A. using their best-in-class rig instrumentation data acquisition system we assure reliable service and robust data to our clients.

SensorsDrilling C.A. is characterized by providing excellent and effective services to our clients in the area of drilling rig instrumentation (surface logging), as well as the design, assembly, installation and commissioning of data acquisition systems. We are capable of providing tailored solutions that adapt to the client's needs.



MAIN SERVICES



Instrumentation
of Drilling Rigs



Hydraulic
Equipment
Maintenance



Real-Time
Drilling Data Transmission

DRILLING RIG INSTRUMENTATION

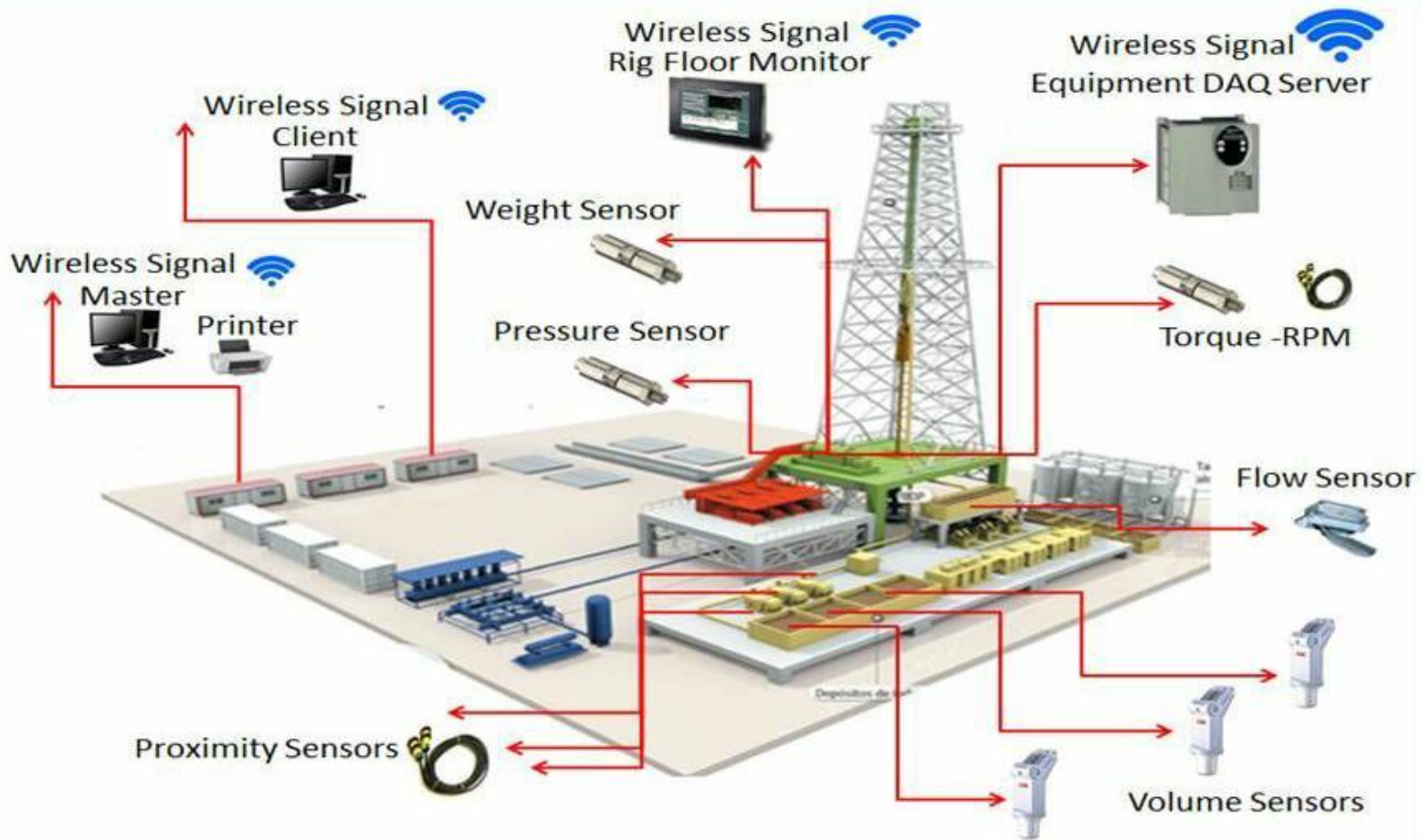
In order to obtain useful drilling data for making timely and accurate decisions, a series of equipment and/or sensors are installed in certain areas of the drilling rig.

This data acquisition system is composed of a set of elements among which are analog and digital sensors, an electronic data acquisition unit and a software application that allows viewing, storing, transmitting and printing all those reports that the user requires. All this executed in real time.

BASIC CONFIGURATION



SENSOR PLACEMENT MAP



SERVICE DESCRIPTION

The Sensors Autonomous Data Acquisition System is a complete package optimized for oil and gas well drilling rig instrumentation. Sensors is comprised of a suite of analog and digital sensors, an NI Compact Field-Point data acquisition electronic unit, and an interface program for processing a wide variety of drilling parameters. It allows to visualization, storage, transmission and printing of information forming a set of options for the operator.

BASIC CONFIGURATION

The NI Compact Field-Point processes the signals from the analog and digital sensors located on the rig, comprised of a programmable automation controller (PAC) in a small modular I/O package with built-in signal conditioning and connectivity to a wide variety of industrial sensors.

Combining the format, specifications and reliability of a PLC, it allows adapting any sensor or electrical signal while eliminating the noise that is generally present in this type of installation.

TECHNICAL SPECIFICATIONS

The data obtained with the compact Field-Point electronic data acquisition unit is transmitted to the main computer using a wireless network to later be processed and converted into information by the program. It allows data visualization and graphs in real time, the graph screens and Data is fully configurable and is based on time and depth data. It includes the function of exporting and printing the data, as well as transmitting information to remote sites through the LAN and WAN network, sending and receiving information implementing the WITS, TCP-IP protocol, etc. The database manager of this program is MySQL Server, which is easy to use and maintain.

CHARACTERISTICS:

The monitoring program has the capacity to manage around 100 parameters related to drilling, some are configurable according to the client's needs, each of these can be assigned the unit in which the information is presented (API, metric , etc.).

Of the total parameters handled by the system, 16 or more are analog current in a range of 4-20 milliamps, it also supports a Depth sensor or Encoder, 4 pumps represented in strokes per minute and accumulated strokes, as well as Also, the analog RPM and torque signal comes from the TOP Drive of the Rig through passive barriers without affecting the functionality of the TOP Drive electrical system.

DRILLING PARAMETERS

Sensor	Signal	Type
Block Position	Pulse	D
RPM	Pulse	D
SPM 1	Pulse	D
SPM 2	Pulse	D
SPM 3	Pulse	D
Pump Pressure	4-20mA	A
WOB	4-20mA	A
Torque (Hydraulic/Electric)	4-20mA	A
Pit Levels máx. (7)	4-20mA	A
Flow Out	4-20mA	A
Total Gas (CH4) 0-100% Volume	4-20mA	A
H2S (Additional Sensor)	4-20 mA	A

ADDITIONAL SENSORS

Additional Sensor	Signal	Type
Temperature	4-20mA	A
Density	4-20mA	A
Casing Pressure	4-20mA	A

ADDITIONAL DERIVATIVE PARAMETERS

Item	Description	QTY
1	Additional Parameter Lag Time	1
2	Additional Parameter Lag Depth	1

SERVICE PROPOSAL

1.- EQUIPMENT & SERVICES

1.1.- DATA ACQUISITION & MANAGEMENT

Item	Description	QTY
1	Dual Core Computer, FB Energy Server (Contractor)	1
2	Dual Core Computer, FB Energy Client (Client Company)	1
3	Explosion Proof LCD Monitor (Rig Floor)	1
4	Data Acquisition System (DAQ)	1
5	UPS for Equipment 1000W	1
6	High Speed Wireless Network	1

SERVICE PROPOSAL

1.2.- BASIC SYSTEM

Item	Description	QTY
1	Depth, Encoder, 1 cycle per second	1
2	WOB, Pressure Transducer, 0-1000 psi	1
3	RPM, Proximity Sensor, 15mm	1
4	Pump Pressure, Pressure Transducer, 0-5000 psi	1
5	Stroke Count, Proximity, 15mm	3
6	Pit Level, Ultrasonic, 7 metres	4
7	Hydraulic Torque, Pressure Transducer, 0-5000 psi	1
8	Electric Torque, Amperometric Clamp, 0-800 amp	1
9	Flow Out, 0-100%	1

SERVICE PROPOSAL

1.3.- INCLUDED SERVICES

Item	Description	QTY
1	Preventative Maintenance once per week	1
2	Technical Support 24hrs	1
3	Data Backup on a CD	1
4	Real-time Data Transmission	1
5	Periodic Audit and revision of data	1
6	Telephone support	1
7	Training in usage of system (basic orientation)	1

A large, stylized letter 'B' logo. The letter is filled with a bright orange color and outlined in a light blue color. The background of the entire image is a dark blue gradient with a faint, repeating pattern of stylized trees or power lines. The image has a torn paper effect at the top and bottom edges, revealing a lighter blue and orange background.

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