EPOCH WELL LOGGING, INC.

COMPANY	ARCO OIL and GAS COMPANY
WELL	CER #13-1-55
FIELD	Banana Slug Prospect
LOCATION	MIST 1522'N and 289'E from the SW corner of Section 1, T5N, R5W, W.W.M.
COUNTY, STATE	Columbia, Oregon
API WELL INDEX NO.	
ELEVATION	729.75' G.L., 741.25' K.B.
DATES	FROM 11-1-89 TO 11-4-89
DEPTHS	FROM 40' K.B. TO 1480' K.B.
SPUD DATE	11-1-89
DRILLING CONTRACTOR	Taylor Drilling Co., Rig #5
MUD COMPANY	Baroid
LOGGING GEOLOGISTS	Craig Anderson Jim Eastes Gary Sandstorm

ABBREVIATIONS

NB	BIT	MW	MUD WEIGHT
RRB	RERUN BIT	VIS	FUNNEL VISCOSITY
RTB	RE-TIP BIT	PV	PLASTIC VISCOSITY
CB	CORE BIT	YP	YIELD POINT
T.G.	TRIP GAS	FL	FLUID LOSS (cc/30 min)
S.G.	SURVEY GAS	CL	PPM CHLORIDE ION
W.G.	WIPER GAS	RM	MUD RESISTIVITY
C.G.	CONNECTION GAS	RMF	FILTRATE RESISTIVITY
WOB	WEIGHT ON BIT	LAT	LOGGED AFTER TRIP
RPM	ROTARY REV/MIN	NR	NO RETURNS
PP	PUMP PRESSURE	PR	POOR RETURNS
SPM	STROKES/MIN	MUD TYPE	Polymer - fresh

CASING RECORD

13 3/8"	AT	40' K.B.
9 5/8"	AT	465' K.B.
	AT	
	AT	

HOLE SIZE

12 1/4"	AT	465' K.B.
6 3/4"	AT	1480' K.B.
	AT	
	AT	

SAND/SANDSTONE · CLAY · LIMESTONE · TUFF · LIGNITE · SHALE · DIATOMITE · DOLOMITE · FOSSIL · GLAUCONITE · SILTSTONE · CONGLOMERATE · BASALT · MICA · PYRITE

OIL: BASED ON LIVE OIL IN UNWASHED CUTTINGS AND PERCENT STAINING AND FLUORESCENCE OF WASHED SAMPLES.

PENETRATION

EPOCH WELL LOGGING, INC.

DRILL RATE (FT/HR)

drilling data

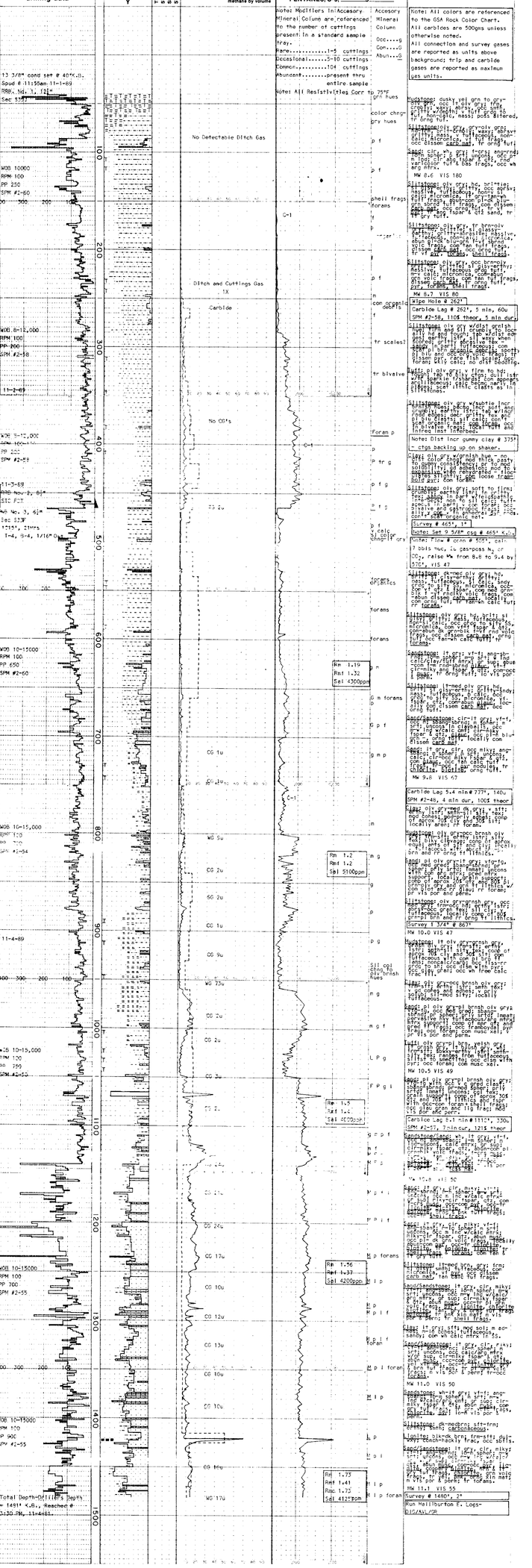
ANALYSIS OF RETURNS

DEPTH · LITHOLOGY · OIL: TRACE, STRONG TRACE, STRONG SHOW · GAS — UNITS: DITCH — TOTAL GAS, CUTTINGS GAS, CALIBRATION 100 units = 2% methane by volume

CHROMATOGRAPH — PPM: METHANE, C-1, ____; ETHANE, C-2, ____; PROPANE, C-3, ____; BUTANES, C-4, ____4____; PENTANES, C-5, ____5____

Accessory Mineral Column: Note: Modifiers in Accessory Mineral Column are referenced to the number of cuttings present in a standard sample tray.
Rare.....1-5 cuttings
Occasional.....5-10 cuttings
Common.....104 cuttings
Abundant.....present throughout entire sample

Note: All Resistivities Corr to 75°F


13 3/8" cond set @ 40'K.B.
Spud @ 11:50am 11-1-89
RRB. No. 1, 12¼"
Sec 53"
WOB 10000
RPM 100
PP 250
SPM #2-60
No Detectable Ditch Gas
Ditch and Cuttings Gas 1X
Carbide
WOB 8-12,000
RPM 100
PP 200
SPM #2-58
11-2-89
No CG's
WOB 8-12,000
RPM 100-120
PP 250
SPM #2-58
11-3-89
WOB Nov-3, 6¼"
STC RCT
RB No. 3, 6¼"
Sec 53"
1755', 21hrs
1-4, 9-4, 1/16" Ou
CG 1u
CG 2u
CG 1u
CG 9u
WG 73u
CG 2u
CG 2u
CG 2