Geolog

FORMATION EVALUATION LOG

Scale: 2" = 100'

COMPANY:	LONGBOW, LLC
WELL:	"Archer-Binford" 2
FIELD:	Wildcat
COUNTY:	Kern, CA
Location:	Sec 4, T29S-R29E; MDB&M
Coordinates:	2950' North & 2400' West from SE/4 Section 4
API No.:	04-030-31871
Spud Date:	2/1/07
Total Depth:	2/2/07
Elevation: K.B.	603'
G.L.	593'
Company Geologist:	John Howe
Company Engineer:	Brad Calliff
Company Pusher:	Larry Smith
Directional Engineer:	
Mud Company:	Enterprise Drilling Fluids
Mud Engineer:	Ken Willis
Drilling Contractor:	Ensign Drilling
Rig Pusher:	Ogie Braun
Rig No.:	506
Geolog Unit No.:	288
Logging Geologists:	Denny Barnes

LOG INTERVAL

DATES: 2/1/07 TO 2/2/07
TO
DEPTHS: 50' TO 1200'
TO

MUD TYPES

Gel/Water TO 200'
LSND TO 1200'
TO

MUD PUMPS

PUMP #1: American SPT-1000 6" x 9"
PUMP #2:

TOTAL DEPTH

MEASURED: 1200'
TRUE VERTICAL:

HOLE SIZE

20" TO 50'
9-5/8" TO 1200'
TO

CASING DATA

16" cond. AT 50'
AT
AT

LEGEND

BG - Background Gas
CB - Core Bit
CO - Connection Gas
CK - Filter Cake
CKF - Check for Flow
CL - Salinity, ppm Cl
CR - Circulate Returns
DB - Diamond Bit
DC - Depth Correction
DCB - Diamond Core Bit
DF - Derrick Floor
DG - Drilling Gas
DS - Directional Survey
DST - Drill Stem Test
EL - Electric Log
E.M.A. - Equivalent Methane in Air, 1% = 50 Units
F - Filtrate, API cc's
F/T - Flowline Temperature
GCM - Gas Cut Mud
GCW - Gas Cut Water
G & OCM - Gas and Oil Cut Mud
GL - Ground Level
KB - Kelly Bushing
LAT - Logged After Trip
NB - New Bit
NCB - New Core Bit
NR - No Returns
PDC - Polycrystalline Diamond Compact Bit
LC - Lost Circulation
PPM - Parts Per Million
PR - Poor Returns
PP - Pump Pressure
PV - Plastic Viscosity
RM - Mud Resistivity, Ohm-Meter
RMC - Mud Cake Resitivity, Ohm-Meter
RMF - Mid-Filtrate Resistivity, Ohm-Meter
RPM - Revolutions Per Minute
RRD - Rerun Bit
RT - Rotary Table
SD - Sand %
SO - Show of Oil
SOL - Solids %
SPM - Strokes Per Minute
STG - Short Trip Gas
SWG - Swab Gas
SVG - Survey Gas
S/T - Suction Temperature
TD - Total Depth
TCL - Trip Chlorides
TG - Trip Gas
TVD - True Vertical Depth
V - Viscosity, API seconds
W - Weight of Mud, ppg/pcf
WOB - Weight on Bit

CEMENT
LIMESTONE
DOLOMITE
GYPSUM
ANHYDRITE
COAL & LIGNITE
CLAY
SHALE
SILTSTONE
SANDY SILTSTONE
FINE SAND
MEDIUM SAND
COARSE SAND
CONGLOMERATE
SANDSTONE
KAOLINITE
TUFF
DIATOMITE
PORCELANITE
CHERT
VOLCANIC
IGNEOUS
METAMORPHIC

DRILL RATE ft/hr — Backup Scale - x10 | DEPTH | CUTTINGS LITHOLOGY % | OIL | TOTAL GAS Ditch Cuttings units | CHROMATOGRAPH C1 C2 C3 C4 C5 ppm | LITHOLOGY DESCRIPTIONS & REMARKS

Begin Logging at Ellipse on 2/1/07

Drilling 9-7/8" hole

Clay : dk gy, wk brn, soft, silty, soluble

Clay : dk gy, soft, vfsilty, sticky, soluble

Clay : dk gy, soft, sdy, vfsilty, w/s shell frags, sticky, soluble

Clay : dk gy, soft, sdy, vfsilty, mica, sticky, w/s shell frags, soluble

WOB 35K
RPM 160
PP 400
SPM 102

W 8.6 V 38 PV 14 YP 11
Gel 3/5 pH 8.0 F/NC FC 2
Sol 2% Sd tr.% Cl 180

Clay : dk gy, soft, sdy, vfsilty, mica, sticky, w/s shell frags, soluble

Clay : dk gy, soft, sdy, vfsilty, mica, sticky, w/s shell frags, soluble

Clay : dk gy, soft, sdy, vfsilty, mica, sticky, w/s shell frags, soluble

Clay : dk gy, soft, sdy, vfsilty, mica, sticky, w/s shell frags, soluble

Clay : dk gy, soft, sdy, vfsilty, mica, sticky, w/s shell frags, soluble

Survey at 502' 0° 00'

WOB 10-15K
RPM 113
PP 540
SPM 104

Clay : dk gy, soft, sdy, vfsilty, mica, w/s shell frags, gummy, sticky, soluble

Sand: lt-med gy, clr, vfln-fn, w/s med ang-subrdd, qtz, arkosic, kaolin, w/s trin beds of lt-med gy, hard fn-med v/ calc sandstone w/ common shell frags & med-dk

Sand: lt-med gy, clr, vfln-fn, w/s med ang-subrdd, qtz, arkosic, kaolin, w/s trin beds of lt-med gy, hard fn-med v/ calc sandstone w/ common shell frags.& med-dk gy siltstone & clay

Sand: lt-med gy, clr, vfln-fn, w/s med ang-subrdd, qtz, arkosic, kaolin, w/s trin beds of lt-med gy, hard fn-med v/ calc sandstone w/ common shell frags.& med-dk gy siltstone & clay

Oil Sand: lt gy, clear, soft, vfn-med & med-cse, ang-subrdd, qtz, arkosic w/ gold & yellow gold oil fluor on mud & cuttings w/s loc. beds of lt gy hard fn-med v/calc sandstone

Sand: lt-med gy, clr, vfln-fn, med-cse, ang-subrdd, qtz, arkosic, w/s trin beds of lt gy, hard fn-med v/ calc sandstone w/ & med siltstone & clay & yellow gold oil fluor on mud & cuttings

Sand: lt-med gy, clr, vfln-fn, med-cse, ang-subrdd, qtz, arkosic, w/s trin beds of lt gy, hard fn-med v/ calc sandstone w/s med gy silty clay

Sand: lt-med gy, clr, vfln-fn, med-cse, ang-subrdd, qtz, arkosic, w/s trin beds of lt gy, hard fn-med v/ calc sandstone w/s med gy silty clay

Sand: lt-med gy, clr, vfln-fn, med-cse, ang-subrdd, qtz, arkosic, w/s trin beds of lt gy, hard fn-med v/ calc sandstone w/ tr. shell frags, w/s med gy siltstone

Carbide test in ditch 1000u

Sand: lt gy, clear, soft, unconsol, fn-vcse, ang-subrdd, qtz, arkosic w. shell frags & loc. trin beds of lt gy hard fn-med v/ calc sandstone

CR. Wire is shoe

RTD 8in

Reached Total Depth at 11:00AM on 2/2/07

TOTAL DEPTH
1200' | Driller
1199' | Halliburton

Logging Unit Released at 11:00 PM on 2/2/07

Run Halliburton E-Logs: HRI, SDL, DSM, GR, SWS

Comments:

Geolog

FORMATION EVALUATION LOG

Scale: 2" = 100'