



KANSAS CORPORATION COMMISSION 1053577
OIL & GAS CONSERVATION DIVISION

Form ACO-1

June 2009

Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 33168
Name: Woolsey Operating Company, LLC
Address 1: 125 N MARKET STE 1000
Address 2: _____
City: WICHITA State: KS Zip: 67202 + 1729
Contact Person: DEAN PATTISSON
Phone: (316) 267-4379
CONTRACTOR: License # 34127
Name: Tomcat Drilling LLC
Wellsite Geologist: CURTIS COVEY
Purchaser: n/a

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
 Gas D&A ENHR SIGW
 OG GSW Temp. Abd.
 CM (Coal Bed Methane)
 Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____
Well Name: _____
Original Comp. Date: _____ Original Total Depth: _____
 Deepening Re-perf. Conv. to ENHR Conv. to SWD
 Plug Back: _____ Plug Back Total Depth: _____
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: D-30,773
 ENHR Permit #: _____
 GSW Permit #: _____
12/05/2010 12/22/2010 01/25/2011
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 15-077-21719-00-00
Spot Description: _____
NE NE NE NE Sec. 23 Twp. 34 S. R. 9 East West
250 Feet from North / South Line of Section
200 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Harper
Lease Name: HIBBARD Well #: 1 SWD
Field Name: HIBBARD
Producing Formation: n/a
Elevation: Ground: 1289 Kelly Bushing: 1300
Total Depth: 6268 Plug Back Total Depth: _____
Amount of Surface Pipe Set and Cemented at: 245 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: _____ Feet
If Alternate II completion, cement circulated from: _____
feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: 20000 ppm Fluid volume: 1800 bbls
Dewatering method used: Evaporated
Location of fluid disposal if hauled offsite: _____
Operator Name: _____
Lease Name: _____ License #: _____
Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West
County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Letter of Confidentiality Received
Date: _____
 Confidential Release Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: Deanna Garrison Date: 10/10/2011



1053577

Operator Name: Woolsey Operating Company, LLC Lease Name: HIBBARD Well #: 1 SWD
 Sec. 23 Twp. 34 S. R. 9 East West County: Harper

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run: <small>Compact Photo Density Compensated Neutron Array Induction Shallow Focused Micro Resistivity</small>	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Top</th> <th style="text-align: left;">Datum</th> </tr> </thead> <tbody> <tr> <td>VIOLA</td> <td>4967</td> <td>-3667</td> </tr> <tr> <td>SIMPSON</td> <td>5032</td> <td>-3732</td> </tr> <tr> <td>ARBUCKLE</td> <td>5228</td> <td>-3928</td> </tr> </tbody> </table>	Name	Top	Datum	VIOLA	4967	-3667	SIMPSON	5032	-3732	ARBUCKLE	5228	-3928
Name	Top	Datum											
VIOLA	4967	-3667											
SIMPSON	5032	-3732											
ARBUCKLE	5228	-3928											

CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Attached	Attached	Attached	Attached	Attached	Attached	Attached	Attached

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone	-			
	-			

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth
		5000 GAL 28% HCL ACID	5290-6262 OPEN HOLE

TUBING RECORD: Size: <u>4.5</u> Set At: <u>5254</u> Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. <u>1/31/2011</u>		Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input checked="" type="checkbox"/> Other (Explain) <u>OPEN HOLE SWD</u>	
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls. Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input checked="" type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Woolsey Operating Company, LLC
Well Name	HIBBARD 1 SWD
Doc ID	1053577

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
CONDUCTOR	30	20	53	43	GROUT	5	(5 yds not 5 sx)
SURFACE	17.25	13.375	54	245	CLASS A	300	2% gel, 3% cc
PRODUCTION	9.625	7	23	5295	60/40 POZ	50	4% gel, 1/4# Celoflake
PRODUCTION	9.625	7	23	5295	CLASS H	150	10% salt, 10% Gypseal, 6# Korseal, 1/4# Celoflake, .8% fluid loss

P.O. # _____

BIG BUCKETS RATHOLE DRILLING

№ 4549

P.O. Box 5252

Enid, Oklahoma 73702

Phone (580) 233-9850

Fax (580) 233-4588

Date 11/30/10

ORDERED BY

Mike Sharp

Bill To Woolsey Oper LLC

Lease Hubbard #1-SWD

Address _____

Legal Sec 23-345-9W

County Harper KS

Rig Jamcat Dolly #2

DESCRIPTION	AMOUNT
Furnish Men & Equipment To <u>Drill cat, mouse holes cellar & 43 ft. of 30" hole - remove dirt from loc.</u>	
Materials Furnished <u>43 ft. of 30" pipe - 4 1/2 yds of 8 pb gravel Welder & materials - 5' of 100" steel cellar form mud tub w/dolly brand</u>	<u>\$6425.00</u>
Operator <u>Paul Wood</u>	Approved By _____
Total	<u>\$6425.00</u>

ALLIED CEMENTING CO., LLC. 041423

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Medicine Lodge

DATE <u>12-5-10</u>	SEC <u>23</u>	TWP <u>34 S</u>	RANGE <u>9 W</u>	CALLED OUT <u>3:30 PM</u>	ON LOCATION <u>6:00 PM</u>	JOB START <u>10:30 AM</u>	JOB FINISH <u>11:15 PM</u>
LEASE <u>Hillard</u>	WELL # <u>SWD #1</u>	LOCATION <u>Conwin Rd South</u>		COUNTY <u>Harrison</u>	STATE <u>Kansas</u>		
OLD OR NEW (Circle one) <u>NEW</u>		to Gas plant East 1/4					

CONTRACTOR Tom-Cat

TYPE OF JOB Surface

HOLE SIZE 17 1/2 T.D.

CASING SIZE 13 3/8 DEPTH 256

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX 500 MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS. _____

DISPLACEMENT 36 1/2 Bbls Freshwater

OWNER Woolsey Operating

CEMENT AMOUNT ORDERED 300 sx Class A + 3/4 cc + 2/4 cc

COMMON Class A 300 @ <u>15.45</u>	<u>4,635</u>
POZMIX @ _____	_____
GEL <u>16 sx</u> @ <u>20.80</u>	<u>124.80</u>
CHLORIDE <u>10 sx</u> @ <u>58.20</u>	<u>582.00</u>
ASC @ _____	_____

EQUIPMENT

PUMP TRUCK CEMENTER Carl Baldry

360-265 HELPER Rymond R

BULK TRUCK # 364 DRIVER Rymond

BULK TRUCK # _____ DRIVER _____

WELL FILE

Regulatory Correspondence @ _____

Drig / Comp Workovers @ _____

Tests / Meters Operations @ _____

HANDLING 366.90 @ 2.40 796.40

MILEAGE 316 @ 2.50 790.00

TOTAL 6,890.20

REMARKS:

Ran 256' 13 3/8 casing
Break circulation
Mix 300 sx A 3+2
Displace with 36 1/2 Bbls water
leave 20 cement in pipe
+ shut in
Cement did circulate

CHARGE TO: Woolsey Operating

STREET _____

CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB 256'

PUMP TRUCK CHARGE 1,019

EXTRA FOOTAGE @ _____

MILEAGE 25 @ 7.00 175.00

MANIFOLD @ _____

TOTAL 1,193.00

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

To Allied Cementing Co., LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME MIKE TARR

SIGNATURE [Signature]

SALES TAX (If Any) _____

TOTAL CHARGES [Crossed out]

DISCOUNT [Crossed out] IF PAID IN 30 DAYS

[Crossed out]

ALLIED CEMENTING CO., LLC. 040599

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:

DATE <u>12-24-2016</u>	SEC. <u>23</u>	TWP. <u>34S</u>	RANGE <u>9W</u>	12-23 CALLED OUT <u>6:30 pm</u>	12-23 ON LOCATION <u>8:00 pm</u>	12-23 JOB START <u>7:30 AM</u>	12-23 JOB FINISH <u>8:30 AM</u>
LEASE <u>Hibbs 2 SWD</u>	WELL # <u>1</u>	LOCATION <u>Hwy 2 & Corwin Rd, 6 south</u>		COUNTY <u>H. Super</u>	STATE <u>Ks</u>		
OLD OR <input checked="" type="checkbox"/> (NEW) (Circle one)			<u>to Old Gss Plant, 2E 922, 3/4 Norm</u>				

CONTRACTOR Tomcsz #2

TYPE OF JOB Production

HOLE SIZE 9 5/8 T.D. 6268'

CASING SIZE 7" DEPTH 5295'

TUBING SIZE 5 1/2" DEPTH 5295'

DRILL PIPE 4 1/2" DEPTH 5295'

TOOL Regulatory Correspondence DEPTH 5295'

PRES. MAX Drig Comd Workovers Op MINIMUM

MEAS. LINE Tests / Meters SHOE JOINT 42'

CEMENT LEFT IN CSG. _____

PERFS. _____

DISPLACEMENT 206 bbls of fresh water

EQUIPMENT

PUMP TRUCK CEMENTER Darin F

352 HELPER Dave F / Ron G

BULK TRUCK

381-252 DRIVER Raymond P

BULK TRUCK

_____ DRIVER _____

OWNER Woolsey Operations

CEMENT

AMOUNT ORDERED 85% 60, 40, 4% 60, 150% Class H + 10% 60 GP + 10% 35H, 6# Keisac, 1.8% FL/L + 1/4 # Plaso 91

COMMON A	<u>51 SX</u>	@ <u>15.45</u>	<u>787.95</u>
POZMIX	<u>34 SX</u>	@ <u>8.00</u>	<u>272.00</u>
GEL	<u>3 SX</u>	@ <u>20.80</u>	<u>62.40</u>
CHLORIDE	_____	@ _____	_____
ASC	_____	@ _____	_____
Class H	<u>150 SX</u>	@ <u>16.75</u>	<u>2512.50</u>
6# Keisac	<u>14 SX</u>	@ <u>29.20</u>	<u>408.80</u>
Salt	<u>16 SX</u>	@ <u>12.00</u>	<u>192.00</u>
Kolsac	<u>900 #</u>	@ <u>0.89</u>	<u>801.00</u>
FL-160	<u>113 #</u>	@ <u>13.30</u>	<u>1502.90</u>
Flosoil	<u>375 #</u>	@ <u>2.50</u>	<u>937.50</u>
_____	_____	@ _____	_____
_____	_____	@ _____	_____
HANDLING	<u>290</u>	@ <u>2.40</u>	<u>696.00</u>
MILEAGE	<u>270 / .25 / 10</u>	@ _____	<u>725.00</u>
			TOTAL <u>8898.05</u>

REMARKS:

Pipe on bottom & break circulation mix 25% for R2 hole, mix loss for mouse hole, mix 50% for suspension cement, mix 150% of 4.5 cement, shut down, wash pump & lines, Release plug, Start displacement, Lift pressure at 180 bbls, slow rate to 34pm at 190 bbls, Pump plug at 206 bbls 700-1400 psi, float bit hole

CHARGE TO: Woolsey Operations

STREET _____

CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB	<u>5295'</u>	@ _____	_____
PUMP TRUCK CHARGE	<u>2185</u>	@ _____	_____
EXTRA FOOTAGE	_____	@ _____	_____
MILEAGE	<u>25</u>	@ <u>7.00</u>	<u>175.00</u>
MANIFOLD	_____	@ _____	_____
_____	<u>Academy</u>	@ _____	_____
_____	_____	@ _____	_____
			TOTAL <u>2360.00</u>

PLUG & FLOAT EQUIPMENT

<u>7"</u>	_____	@ _____	_____
1-Triplex shoe	_____	@ _____	<u>1005.00</u>
1-Loach Down Plug	_____	@ _____	<u>205.00</u>
4-Turnelizers	_____	@ <u>50.00</u>	<u>200.00</u>
1-Basket	_____	@ _____	<u>200.00</u>
_____	_____	@ _____	_____
			TOTAL <u>1610.00</u>

To Allied Cementing Co., LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME r Allen F. Dick

SIGNATURE [Signature]

SALES TAX (If Any) _____

TOTAL CHARGES [Signature]

DISCOUNT _____ IF PAID IN 30 DAYS

Thank You!!!

Covey

The Well Watchers

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: HIBBARD #1 SWD
Location: Section 23 - Township 34 South - Range 9 West
License Number: 15-077-21,719 - 00-00 Region: Harper County, KS.
Spud Date: 5 December 2010 Drilling Completed: 22 December 2010
Surface Coordinates: 250' FNL & 200' FEL
(Approx NE NE NE NE)

Bottom Hole Coordinates:

Ground Elevation (ft): 1,289' K.B. Elevation (ft): 1,300'
Logged Interval (ft): 5,000' To: 6,262' Total Depth (ft): 6,262'
Formation: Kinderhook Shale → Arbuckle
Type of Drilling Fluid: Chemical; Low Solids (non-dispersed)

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: WOOLSEY OPERATING COMPANY, LLC
Address: 125 North Water, Suite 1000 Geologist:
Wichita, Kansas 67202 Dean Pattisson
(316) 267-4379

GEOLOGIST

Name: Curtis Covey
Company: COVEY - The Well Watchers
Address: 6548 Bedford Circle wellsightgeo1@gmail.com
Derby, Kansas 67037
Office: (316) 776 - 0367 Cell: (316) 217-4679

KB: 1,300'

FORMATION TOPS

GL: 1,289'

Formation	Rotary Sample Depth (Datum)	E-log Depth (Datum)
Wilcox Sand	5,038' (-3,738')	5,040' (-3,740')
McLish Sand	5,186' (-3,886')	5,188' (-3,888')
Arbuckle	5,228' (-3,928')	5,228' (-3,928')

IRTD: 5,302' LTD: 5,304' iATD: 5,304'

Rotary sample depth is 2' lower than E-logger's depth.

FINAL RTD: 6,262'

E-Loggers: Weatherford
Liberal, Kansas

DST #1 - ARBUCKLE

Rotary Depth: 5,786' - 5,827'
 Logger's Depth: NA

IFP: 728# - 2,070# / 30"
 ISIP: 2,502# / 60"
 FFP: 2,066# - 2,494# / 60"
 FSIP: 2,502# / 90"
 151 deg F
 MH: 2,971# - 2,332#

Rec: 283' Water cut Mud (40%W,60%M)
 95' Mud cut Water (30%M,70%W)
 189' Mud cut Water (20%M,80%W)
 378' Mud cut Water (10%M,90%W)
 4,055' Muc cut Water (5%M,95%W)

Total Fluid: 5,000'

Recovery Water: (35M - top)
 (80M - rest)
 System Water: (4,000 ppm)
 Reported Rw =
 0.23 ohms @ 63 deg F - top
 0.11 ohms @ 63 deg F - rest

IF: BOB in 1 minute, Strong Blow.
 IS: Weak Blow - slow build to 3 inches.
 FF: BOB in 1 minute, Strong Blow.
 FSI: Weak Surface Blow, no more than 1/4 inch.

Trilobite Testing, Inc.
 Pratt, KS.

2010

DAILY DRILLING STATUS - DECEMBER

2010

30" Hole

3 Nov — 20" conductor set @ 43'
 with 5 yds grout. 5'x5' cellar.

17-1/4" Hole

5 Nov — Spud @ 10:30am. Drill to 280'.
 Run 13-3/8" casing. Set casing
 @ 245'. Cemented w/ 230 sx
 Class A (2% gel+3%CC). [Allied]
 Cement did circulate.
 Plug down @ 11:15pm. WOC.

9-7/8" Hole

Tri-Cone: 280' → RTD.

6 Nov — WOC. 6am @ 280'.
 Under surface casing @ 1:45pm.

9-7/8" Hole

Tri-Cone: 280' → RTD.

7 Dec — 6am @ 776'.
 Work on Pump & clutches.

8 — 6am @ 1,710'.

9 — 6am @ 2,221'.

10 — 6am @ 2,800'.

11 — 6am @ 3,374'.

12 — 6am @ 4,013'.

13 — Bit Trip @ 4,314'.

Resumed Drilling.

6am @ 4,324'.

14 — 6am @ 4,675'.

15 — 6am @ 5,050'.

Bit Trip @ 5,057'.

16 — Resumed Drilling.

6am @ 5,123'.

Drill to 5,302' @ 8:50pm.

Prep hole for E-log.

7-7/8" Hole

Tri-Cone: 5,302' → RTD.

17 Dec — 6am @ 5,302'.

E-log.

18 — Resumed Drilling @ 5am.

6am @ 5,312'.

19 — 6am @ 5,680'.

Drill to 5,827'. Prep

Hole. Start &

20 — 6am @ 5,827'.

Finish DST #1: Arbuckle

(5,786' - 5,827').

T/I after test, repeated circ.

21 — 6am @ 5,827'.

Resumed Drilling @ 6:20am.

22 — 6am @ 6,120'.

RTD @ 6,262' @ 1:30pm.

HOLE DEVIATION (280' - 5,777') & STRAP

DEPTH / TVD	— INCLINATION	AZIMUTH	NORTH	SOUTH	EAST	WEST	DOGLEG deg/100'
280' /	— 1.00	(Surface)					
996' /	— 0.50						
1,490' /	— 0.75						
2,000' /	— 1.25						
2,251' /	— 1.25						
2,598' /	— 1.00						
3,037' /	— 1.00						
4,013' /	— 0.75						
4,324' /	— 0.75	(Bit Trip)					
4,706' /	— 0.25						
5,057' /	— 1.00						
5,302' /	— 1.00	(E-log)					
5,777' /	— 0.75						

E-LOG STRAP -
 Board: 5,302.84'
 Strap: 5,307.91'
 Diff: 5.07'

TOMCAT DRILLING, LLC.

100 South Main, # 508
Wichita, Kansas 67202

(316) 262-8554

Drilling Rig #2 - (620) 282-0370

Toolpusher: Carlos Ayala (620) 282-8667

On main hole (tri-cone), 80 RPM.

Mud Pump:
Main: 3ND 1000
6" x 12" @ 100 SPM.

Pump Pressure: 1,400 psi @ standpipe.

280' → 5,302':

Dry Wt of Collars: 73,025#
[117.2' x 140.5#/ft = 16,467#]
[616.44' x 91.75#/ft = 56,558]
Drill Collars: 7-7/8" OD x 3" ID &
6-1/4" x 2-3/16" ID
Buoyancy Wt of Collars: 62,655#
[73,025# x .858 (9.3ppg) = 62,655#]
Available WOB: 53,291#
[62,695# x .85 = 53,257#]

Contractor reports running
48M on bit
[At & See Conc @ 4,894' for details]
Tension on drill string - 9,398#
[15% Design Factor]
to keep drill string straight.

Weight Indicator light by 15%; therefore,
48M showing has true WOB 55,200M.

5,303' → RTD

Dry Wt of Collars: 59,445#
[647.91' x 91.75#/ft = 59,445]
Drill Collars: 6-1/4" x 2-3/16" ID
Buoyancy Wt of Collars: 51,123#
[59,445# x .860 (9.2ppg) = 51,123#]
Available WOB: 43,454#
[51,123# x .85 = 43,454#]
Weight Indicator weighs
light by 15%, therefore
WI of 37,786# = true WOB 43,454#.

Contractor report running
28M on bit in Arbucke @ 5,303'.
Contractor report running
36M on bit in Arbucke @ 5,338'.

BIT RECORD

DATE	SIZE	TYPE	JET SIZE	DEPTH IN / OUT	CUM. FT.	HOURS	ROP
5 Dec	17-1/4"	REED	14 - 16 - 16 - 16	0' / 280'	280'	6.00	35.0
6 Dec	9-7/8"	REED TD52X *	16 - 16 - 16 - 16	280' / 4,324'	4,044'	133.25	30.4
13 Dec	9-7/8"	REED ETD 35	16 - 16 - 16 - 16	4,324' / 5,057'	732'	43.25	18.3
16 Dec	9-7/8"	REED TD52X *	16 - 16 - 16 - 16	5,057' / 5,302'	247'	19.50	12.7
		* Same Bit					
18 Dec	7-7/8"	REED TD53AM	16 - 16 - 16 - 16	5,302' / 5,827'	525'	30.25	17.4
20 Dec	7-7/8"	REED R30AP	15 - 15 - 15 - 15	5,827' / 6,262'	435'	31.00	14.0

ROCK TYPES

POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

LITHOLOGY

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Granite wash
- Congl
- Dol lmst
- Silty dol
- Calc dol
- Dol 2
- Dol
- Gyp
- Igne
- Lmst 2

- Lmst
- Meta
- Mrlst
- Salt
- Shale 3
- Shale 3
- Shale
- Shcol
- Shgy
- Sltst
- Ss
- Till
- Ss 2

MINERAL

- Mica
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chttt
- Dol

- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Copper
- Ooliticastic
- Ooloid
- Oolite
- Sucrosic
- Dark specks

- Silty dol
- Anhy
- Arg
- Bent
- Chert
- Coal
- Dol
- Dol ls
- Gyp
- Ls
- Mrst
- Calc dol
- Sltstrg
- Ssstrg
- Chalk

SHOW

- Oil
- Spotted
- Ques
- Dead
- Gas
- Oil/gas
- Bed contact

STRINGER

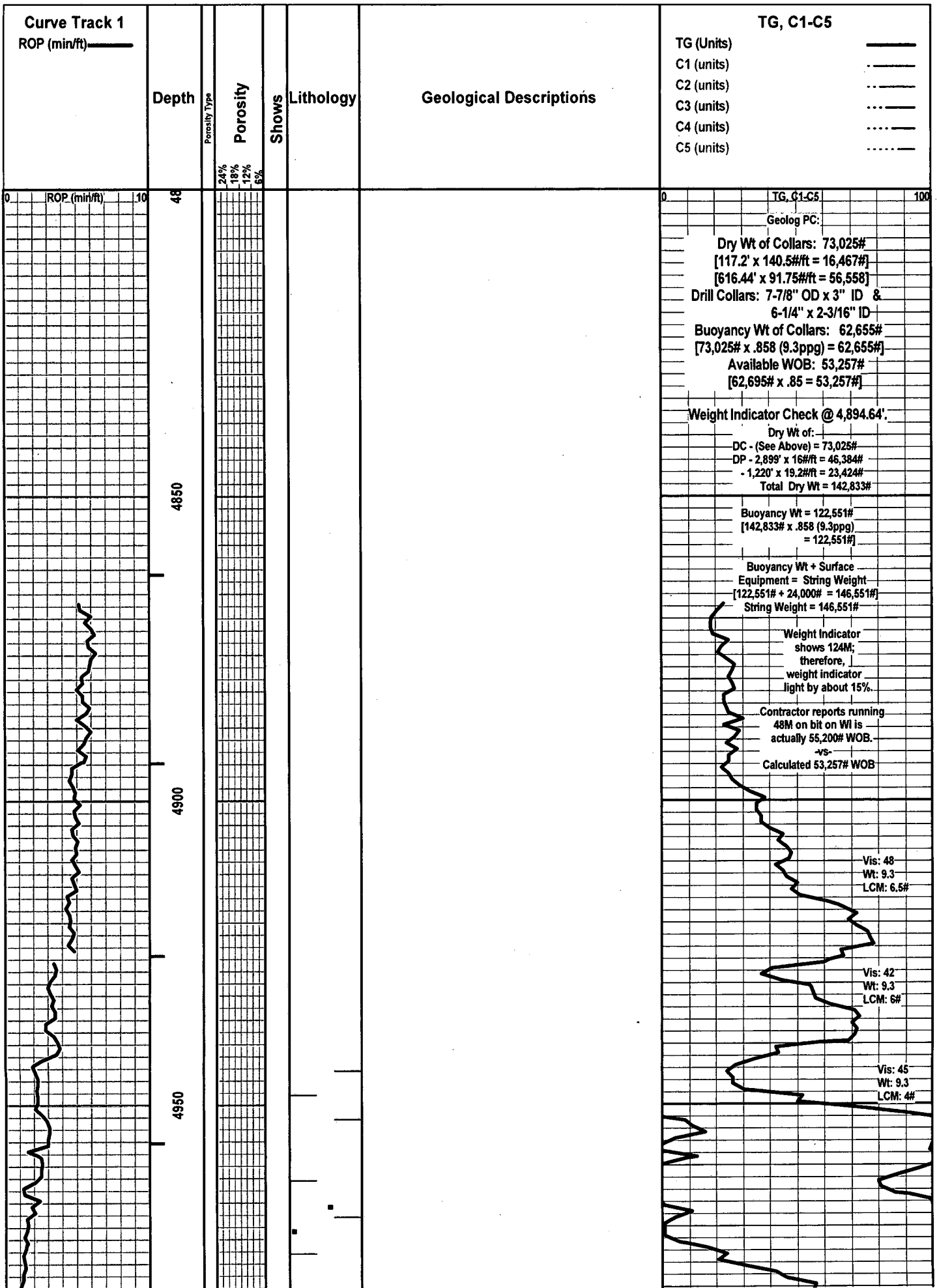
- Dol ls

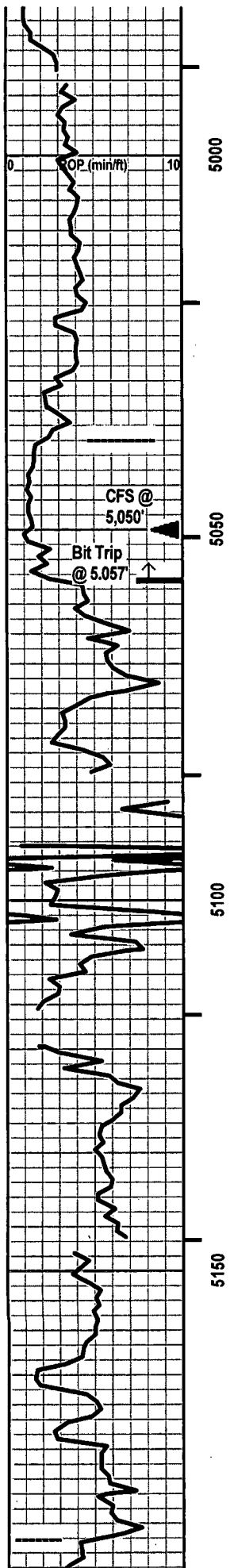
ACCESSORIES

- | | | | |
|--|---|---|--|
| <ul style="list-style-type: none"> Algae Amph Belm Bioclst Brach Bryozoa | <ul style="list-style-type: none"> Cephal Coral Spore Crin Echin Fish | <ul style="list-style-type: none"> Foram Fossil Gastro Oolite Ostra Pelec | <ul style="list-style-type: none"> Pellet Pisolite Plant Strom |
|--|---|---|--|

OTHER SYMBOLS

- | | | | | |
|--|--|---|--|---|
| <h3>ACTIVITY</h3> <ul style="list-style-type: none"> Lost circluation Circulate for sample 2 Circulate for samples Rtd | <h3>INTERVAL</h3> <ul style="list-style-type: none"> Bit trip Core Dst | <h3>Jammed core</h3> <ul style="list-style-type: none"> Jammed core | <h3>EVENT</h3> <ul style="list-style-type: none"> Connection Rft | <h3>Sidewall</h3> <ul style="list-style-type: none"> Sidewall |
|--|--|---|--|---|





few pcs: LS (dolo in part) - Off White/ Tans. Sing/ Mot. mixture of Crypto-/ Micro-xln. adding F-xln with depth. xln por. some Re-xln. (some CHERT - Clear/ White, Mottled -or- Tan, Grays, White, Clear - Mottled. Opaque to mixed Transparent. misc Inclusions: sponge, fossil hash/ fragments. No tripolitic.) Firm. No tr/ vis por.

WILCOX SAND 5,038 (-3,738')

No sand in drilling and circulations samples.

SS - Clear/ Off White/ Lt Gray. Mot/ Mixed. Mixture of some Silt/ mostly VF qtz grains. SA/SR. Mod sort. Mod sph. tr Vitreous/ mostly Frosted luster. tr Point/ mostly Sutured grain contact. argil in part. Dol/ Si cement. Dolomitic infill in part. Partly Friable to Firm. Tr/ Fair vis por.

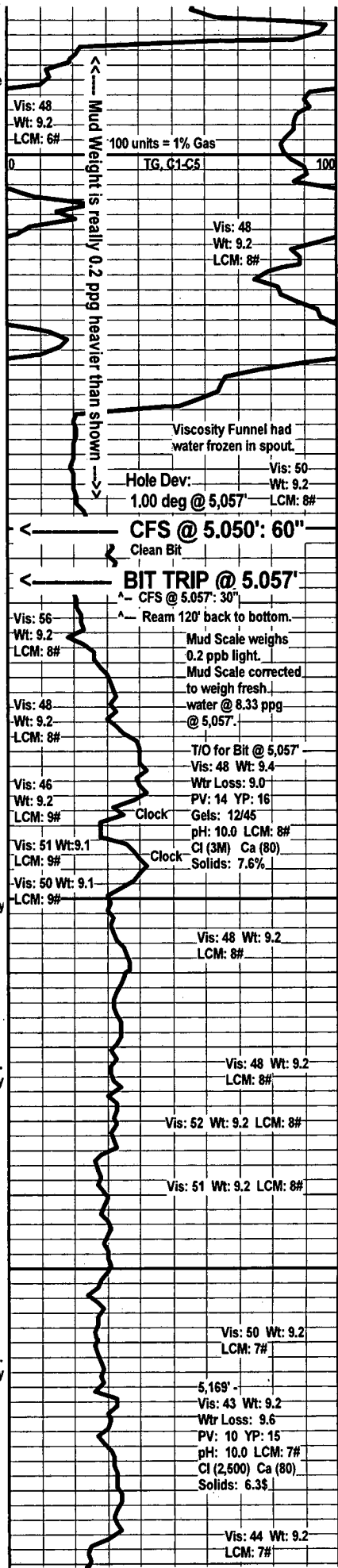
SS - Clear/ Off White. Mot/ Mixed. Mixture of some Silt/ mostly VF/ rare F qtz grain. Silt/ VF argil/shale grains. SA/SR. Mod sort. Mod sph. tr Vitreous/ mostly Frosted luster. tr Point/ mostly Sutured grain contact. argil in part. Si cement. argil/shaly in part. Partly Friable to Firm. Tr/ Fair/ tr Good vis por. few pcs: SS similar to above... adding irregular Med Tan stain, nothing else.

SH - Med/ Dark Gray, some Greenish-Gray. rare Tannish-Grays. some sandy lensing in part (similar to above). Ductile. Blocky to splintery. mostly Massive with depth. rare Micro-lam's.

SH - Med/ Dark Gray, some Greenish-Gray. rare Tannish-Grays. some sandy lensing in part (similar to above). Ductile. Blocky to splintery. mostly Massive with depth. rare Micro-lam's.

McLISH SD 5,186' (-3,886')

numerous pcs: SS (1) - Clear/ Lt Gray/ some White. Mot/ Mixed to Silt/ mostly VF & F qtz grain. SA/SR. Mod sort. Mod



Vis: 48
Wt: 9.2
LCM: 8#

100 units = 1% Gas
TG, C1-C5

Vis: 48
Wt: 9.2
LCM: 8#

Viscosity Funnel had water frozen in spout.

Hole Dev: Vis: 50
1.00 deg @ 5,057' Wt: 9.2
LCM: 8#

CFS @ 5,050': 60"
Clean Bit

BIT TRIP @ 5,057'
CFS @ 5,057': 30"

Ream 120' back to bottom.
Mud Scale weighs 0.2 ppb light.
Mud Scale corrected to weigh fresh water @ 8.33 ppg @ 5,057'.

Vis: 48
Wt: 9.2
LCM: 8#

T/O for Bit @ 5,057'
Vis: 48 Wt: 9.4
Wtr Loss: 9.0
PV: 14 YP: 16
Gels: 12/45
pH: 10.0 LCM: 8#
Cl (3M) Ca (80)
Solids: 7.6%

Vis: 46
Wt: 9.2
LCM: 9#

Vis: 51 Wt: 9.1
LCM: 9#

Vis: 50 Wt: 9.1
LCM: 9#

Vis: 48 Wt: 9.2
LCM: 8#

Vis: 48 Wt: 9.2
LCM: 8#

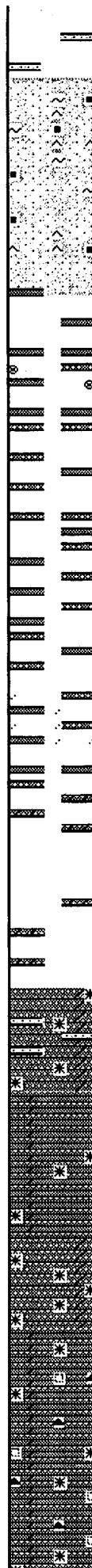
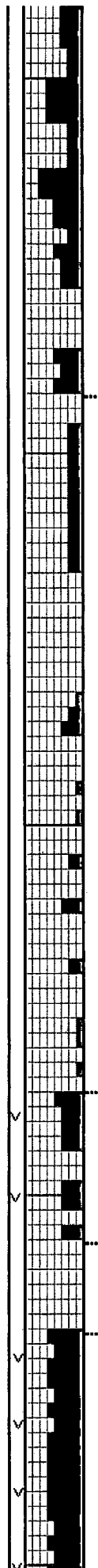
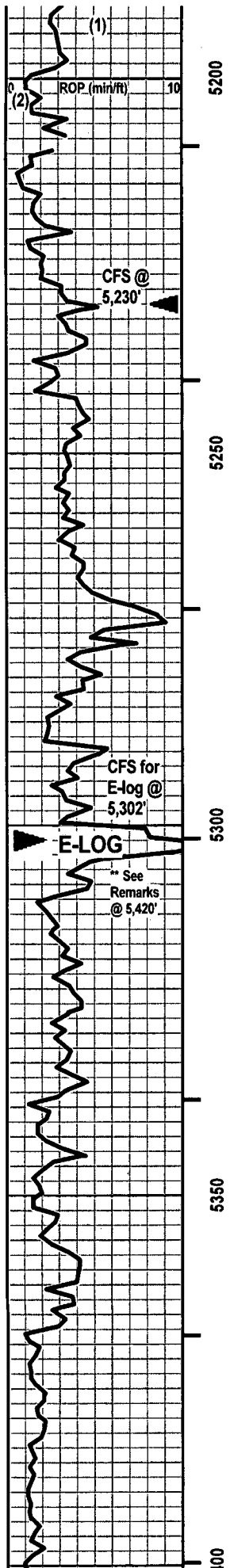
Vis: 52 Wt: 9.2 LCM: 8#

Vis: 51 Wt: 9.2 LCM: 8#

Vis: 50 Wt: 9.2
LCM: 7#

5,169' -
Vis: 43 Wt: 9.2
Wtr Loss: 9.6
PV: 10 YP: 15
pH: 10.0 LCM: 7#
Cl (2,500) Ca (80)
Solids: 6.3%

Vis: 44 Wt: 9.2
LCM: 7#



Mixed. tr silty muscovite & f qtz grain. SA/SR. Mod sort. Mod sph. Vitreous/ Frosted luster. mixture of: some point/ mostly sutured grain contact. Si/ tr Calc cement. mixture of: no inclusions, minute dark flecks, pale green (VF, SA) inclusions, black carb flecks. barren/ tr pyrite. mostly friable. some Firm/dense. tr/ Fair vis por.

SS (2) - Clear/ Grays/ some White, Greens. Mot/ Mixed. tr silt/ mostly VF & F qtz grain. SA/SR. Mod sort. Mod sph. Vitreous/ Frosted luster. mixture of: some point/ mostly sutured grain contact. Si/ tr Calc cement. mixture of: rare - no inclusions, mostly - minute dark flecks, pale green (VF, SA) inclusions, and/or black carb flecks. barren/ tr/ rare some pyrite. mostly friable. tr Firm/dense. tr/ Fair/ rare Good vis por.

ARBUCKLE 5,228' (-3,928')

Few pcs: DOL - Med Brownish Tan / Lt Brown/ some Lt Gray. Sing. mixture of: crypto-xln. and some Micro- some VF subehedral xtal. xln por. tr VF, Dark Tan Oolites. partly Firm. No/ tr vis por.

DOL: Lt Gray/ Brownish Gray/ Tans. Sing. Micro- VF Re-xln. some subhedral xtals. partly Firm. some No/ mostly tr vis por.

DOL: Lt Gray/ Brownish Gray/ Tans. Sing. Micro- Crypto Re-xln. rare subhedral xtals. Firm/Dense. some No/ mostly tr vis por.

Dol (Cal) - Tans/ Brownish Tan. Sing. Micro-Re-xln. xln & part por. some VF, SR Vitreous luster qtz grains. Firm. No/ tr vis por.

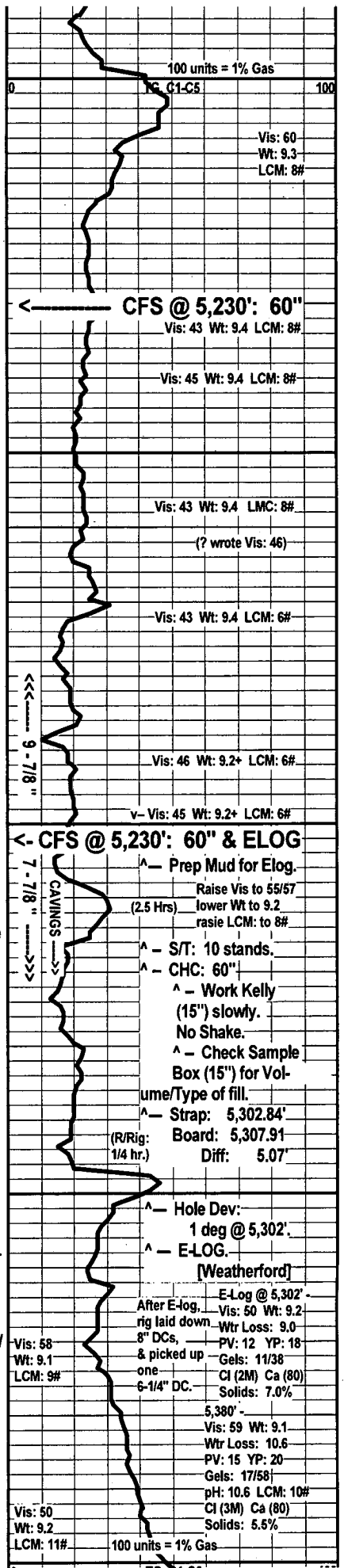
DOL: Lt Gray/ Brownish Gray/ Tans. Sing. Micro- VF Re-xln. some subhedral xtals. partly Firm. some No/ mostly tr vis por.

Add: few pcs: DOL - Off Lt Whitish Gray. Sing. Micro-Re-xln. xln & part por. [F/VF, SA, Vitreous Qtz Grains 'floating' in Dol matrix.] partly Firm. No/ tr vis por.

DOL: Lt Gray/ Brownish Gray/ Tans. Sing. Micro- VF Re-xln. xln & some vuggy por. some subhedral xtals. partly Firm. mostly tr/ some Fair & Good vis por.

DOL: Lt Gray/ Lt & Med Tan. Sing. Micro- VF Re-xln. xln por. rare, minute subhedral xtals. Firm. mostly No/ tr vis por.

DOL - Tans/ Pale Lt Gray. Sing/ tr Mot. rare Crypto- mostly Micro- & VF Re-xln. xln and rare sucrosic por. tr Micro- VF subehedral xtals. (Chert in part: Brown. mostly Sing. Opaque to semitransparent. No/ tr inclusions. VF, SR 'sandy' texture tripolitic.) Interbedded Friable/ Firm. tr/ mostly Fair to Good vis por.



100 units = 1% Gas

100 units = 1% Gas

Vis: 60
Wt: 9.3
LCM: 8#

CFS @ 5,230': 60"
Vis: 43 Wt: 9.4 LCM: 8#

Vis: 45 Wt: 9.4 LCM: 8#

Vis: 43 Wt: 9.4 LCM: 8#
(? wrote Vis: 46)

Vis: 43 Wt: 9.4 LCM: 6#

Vis: 46 Wt: 9.2+ LCM: 6#

v- Vis: 45 Wt: 9.2+ LCM: 6#

CFS @ 5,230': 60" & ELOG

^ - Prep Mud for Elog.
Raise Vis to 55/57
(2.5 Hrs) lower Wt to 9.2
raise LCM to 8#

^ - S/T: 10 stands.

^ - CHC: 60"

^ - Work Kelly
(15") slowly.
No Shake.

^ - Check Sample
Box (15") for Vol-
ume/Type of fill.

^ - Strap: 5,302.84'
Board: 5,307.91'
Diff: 5.07'

(R/Rig: 1/4 hr.)

^ - Hole Dev:
1 deg @ 5,302'

^ - E-LOG.

[Weatherford]

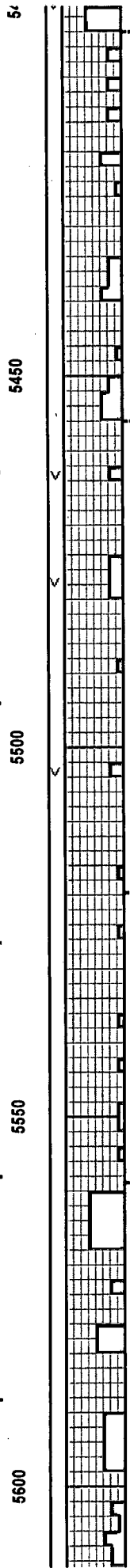
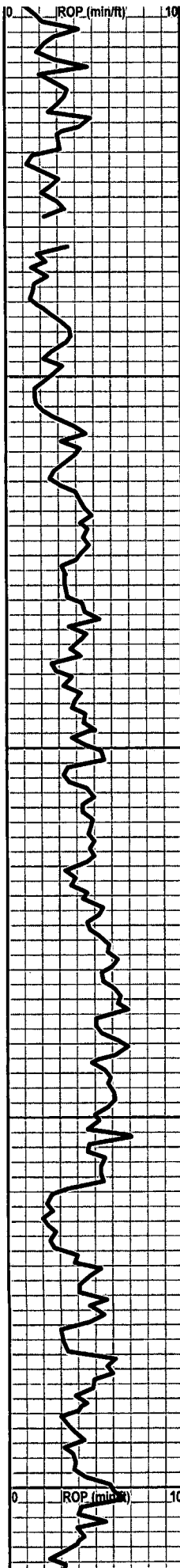
After E-log, E-Log @ 5,302'
rig laid down Vis: 50 Wt: 9.2
8" DCs, Wtr Loss: 9.0
& picked up PV: 12 YP: 18
one Gels: 11/38
6-1/4" DC. Cl (2M) Ca (80)
Solids: 7.0%

5,380'

Vis: 59 Wt: 9.1
Wtr Loss: 10.6
PV: 15 YP: 20
Gels: 17/58
pH: 10.6 LCM: 10#
Cl (3M) Ca (80)
Solids: 5.5%

Vis: 50
Wt: 9.2
LCM: 11#

100 units = 1% Gas



DOL - Tans/ Off White/ some Pale Lt Gray. Sing/ tr Mot. rare Crypto-/ mostly Micro- & VF Re-xln. xln and rare sucrosic por. tr Micro-/ mostly VF & F subeuhedral xtals. rare, minute pyrite. (Chert in part: Clear/ Grays. Mot. Opaque to semitransparent. misc SR Ooloidal inclusions. No tripolitic.) Interbedded Friable/ Firm. tr/ mostly Fair & Good vis por.

DOL - Tans/ Pale Lt Gray/ tr Brown. Sing/ tr Mot. some Crypto-/ mostly Micro- & VF Re-xln. xln and rare sucrosic por. tr Micro-/ mostly VF & F subeuhedral xtals. rare, minute pyrite. Interbedded Friable/ mostly Firm. some No/ mostly tr/ rare Fair vis por.

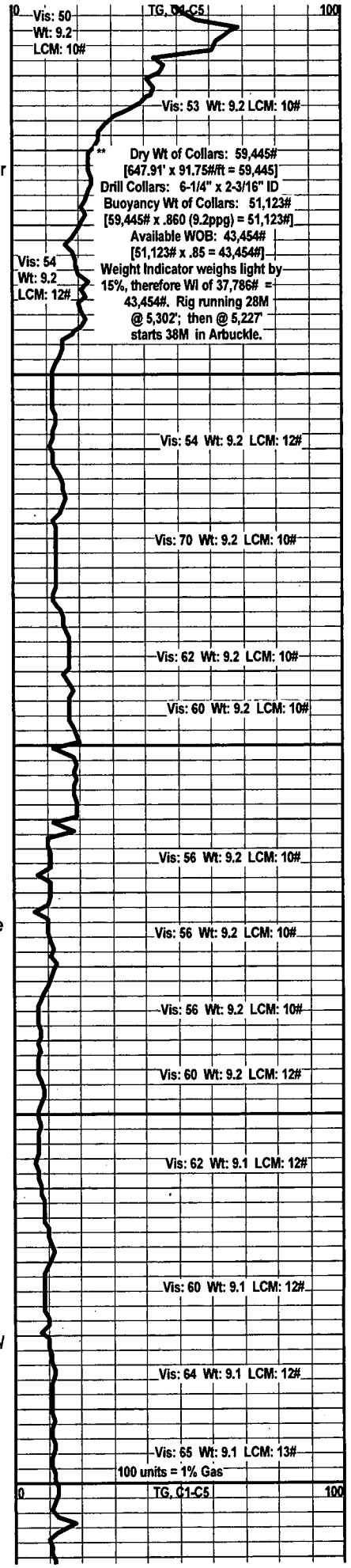
DOL - Tans/ Pale Lt Gray/ tr Brown. Sing/ tr Mot. some Crypto-/ mostly Micro- & VF Re-xln. xln and rare sucrosic por. tr Micro-/ mostly VF & F subeuhedral xtals. rare, minute pyrite. Interbedded Friable/ mostly Firm. some No/ mostly tr/ rare Fair vis por.

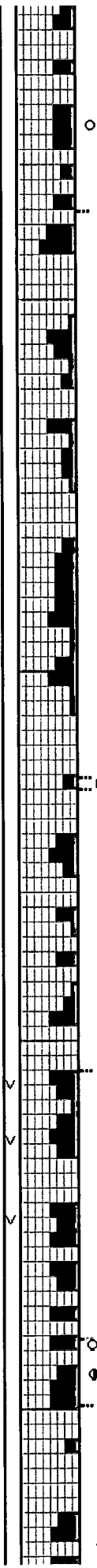
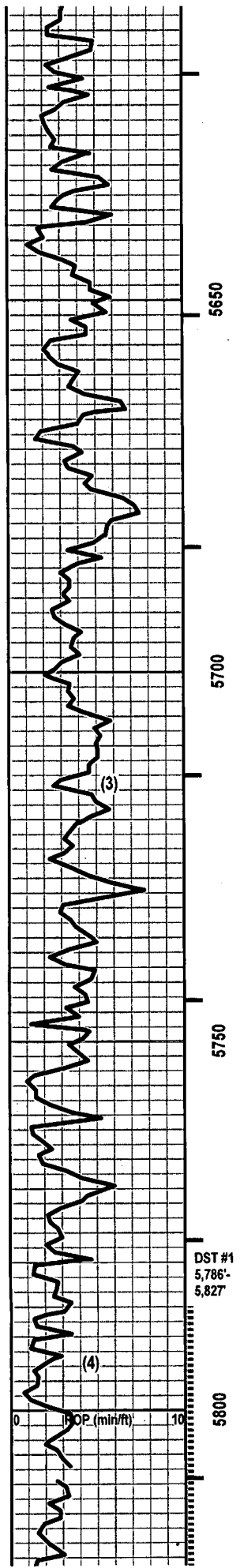
DOL - Tans/ Pale Lt Gray. Sing/ tr Mot. mostly Crypto-/ some Micro- & rare VF Re-xln. xln and rare sucrosic por. Firm. mostly No/ some tr vis por.

Interbedded & Intermixed DOL's

Dol / Dol (rare Calc) - Tans/ some Off White, Lt Gray. Sing. mixture of: Crypto-/ Micro-/ some VF Re-xln. No/ some subeuhedral xtals. rare minute. Dense. some No/ some Tr vis por.

DOL - Tans/ some Off White, Lt Gray. Sing. Micro-/ VF/ F Re-xln. Subeuhedral xtals. sucrosic & some xln por. Friable to partly Firm. tr/ Fair & Good vis por.





DOL - Tans/ Off White/ some Pale Lt Gray. Sing/ tr Mot. rare Crypto-/ mostly Micro- & VF Re-xln. xln and rare sucrosic por. tr Micro-/ mostly VF & F subeuhedral xtals. [Chert in part: Clear/ Off White/ tr Grays. Mot. Opaque to semitransparent. misc SR Ooloidal inclusions. No tripolitic.] Interbedded Friable/ Firm. tr/ mostly Fair & Good vis por.

Add: VF pellets in clear/Off White dolo cement.

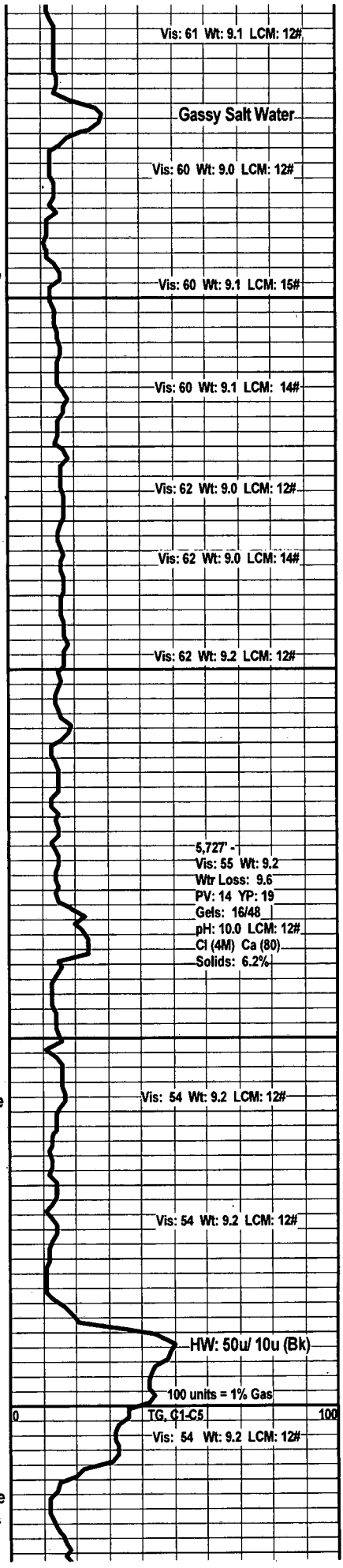
LS (Dol) (3) - Tan, VF Oolites. Clear, dolomitized matrix. Black, asphaltic infill. Friable. Fair vis por.

DOL - Tans/ some Off White, Lt Gray. Sing. Micro-/ VF/ F Re-xln. some Subeuhedral to Ang/SA euhedral xtals. sucrosic & some xln por. Friable to partly Firm. tr/ Fair & Good vis por.

DOL - Tans/ Pale Lt Gray/ tr Brown. Sing/ tr Mot. some Crypto-/ mostly Micro- & VF Re-xln. xln, some vuggy and rare sucrosic por. tr Micro-/ mostly VF & F subeuhedral xtals. Interbedded Friable/ mostly Firm. some tr/ mostly Fair vis por.

DOL (4) - Tans/ some Off White, Lt Gray. Sing. Micro-/ VF/ F Re-xln. some Subeuhedral to Ang/SA euhedral xtals. tr sucrosic & xln por. Friable to partly Firm. tr/ Fair vis por. No odor. No free oil or gas. spotted/ some uniform Med Brown stain. Weak Pos cut/ residual. Weak Pos acid/ residual.

DOL - Tans/ Pale Lt Gray/ tr Brown. Sing/ tr Mot. some Crypto-/ mostly Micro- & VF Re-xln. xln, some vuggy and rare sucrosic por. tr Micro-/ mostly VF & F subeuhedral xtals. Interbedded Friable/ mostly Firm. some tr/ mostly Fair vis por.



Vis: 61 Wt: 9.1 LCM: 12#

Gassy Salt Water

Vis: 60 Wt: 9.0 LCM: 12#

Vis: 60 Wt: 9.1 LCM: 15#

Vis: 60 Wt: 9.1 LCM: 14#

Vis: 62 Wt: 9.0 LCM: 12#

Vis: 62 Wt: 9.0 LCM: 14#

Vis: 62 Wt: 9.2 LCM: 12#

5.727' -
Vis: 55 Wt: 9.2
Wtr Loss: 9.6
PV: 14 YP: 19
Gels: 16/48
pH: 10.0 LCM: 12#
Cl (4M) Ca (80)
Solids: 6.2%

Vis: 54 Wt: 9.2 LCM: 12#

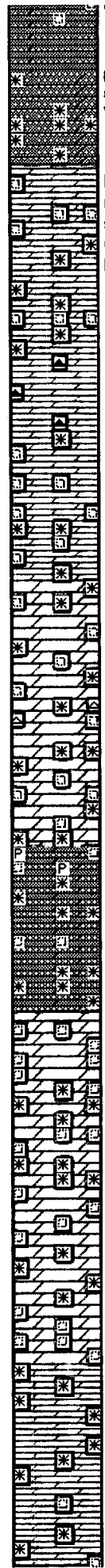
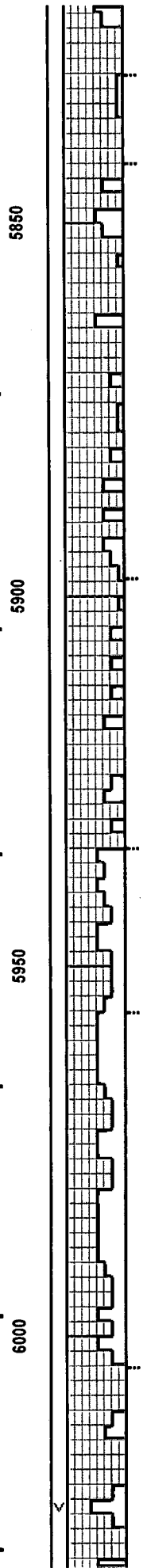
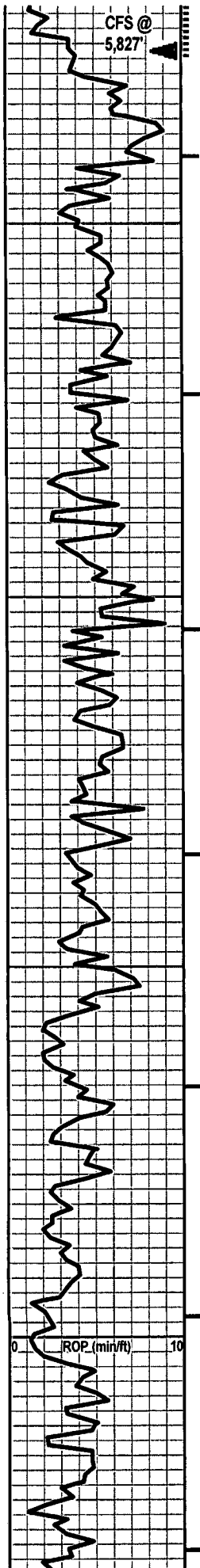
Vis: 54 Wt: 9.2 LCM: 12#

HW: 50u/ 10u (Bk)

100 units = 1% Gas

TG, C1-C5

Vis: 54 Wt: 9.2 LCM: 12#



min. some of messy fair vis por.

DOL - Lt Gray/ Tan. Sing. Micro-/ VF Re-xln. xln por. minute subeuhedral xtals. rare minute pyrite xtals. Firm/Dense. No/ tr vis por.

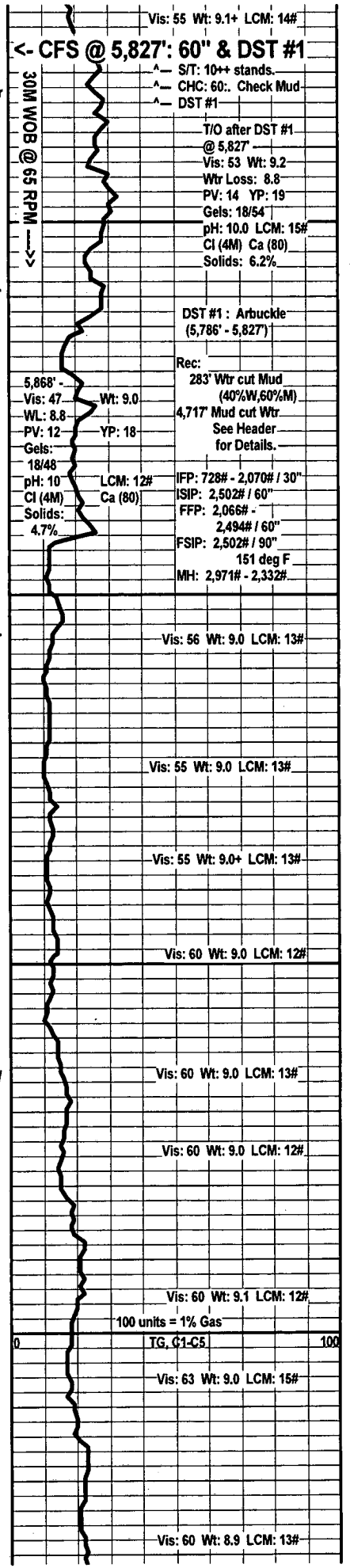
DOL - Tans/ Off White/ some Lt Gray. Sing/ tr Mot. rare Crypto-/ mostly Micro- & VF Re-xln. xln and sucrosic por. tr Micro-/ VF subeuhedral xtals. (rare Chert in part: Clear/ White/ Gray. mostly Sing/ tr Mot. Opaque to semitransparent. No/ tr VFOoloidal inclusions. No tripolitic.) Interbedded Friable/ Firm. some No/ tr & some Fair vis por.

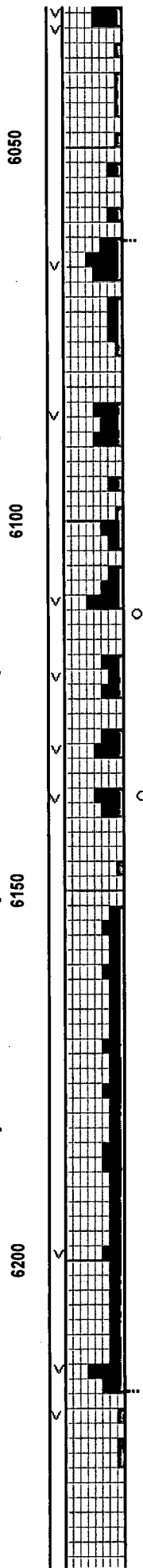
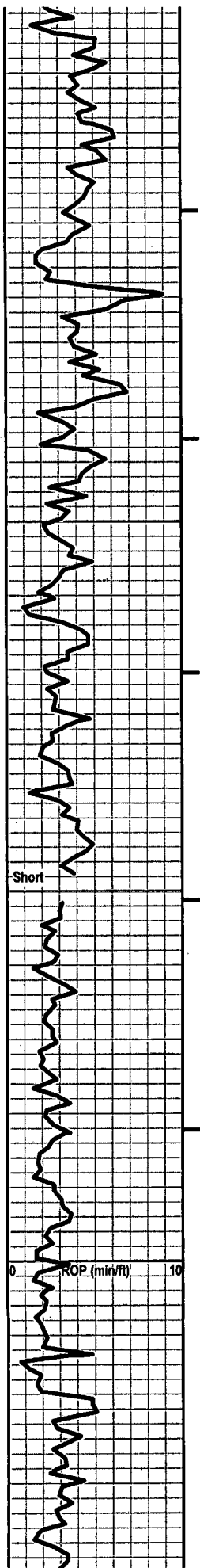
DOL - Tans/some Off White/ some Lt Gray. Sing/ tr Mot. rare Crypto-/ mostly Micro- & VF Re-xln. xln and tr sucrosic por. tr Micro-/ VF subeuhedral xtals. (rare Chert in part: Clear/ White/ Brown. mostly Sing/ tr Mot. Opaque to semitransparent. No/ tr VFOoloidal inclusions. No tripolitic.) Interbedded Friable/ Firm. some No/ tr & some Fair vis por.

DOL - Similar to above. Lt Gray has minute, pyritic xtals.

DOL - Tans/ Off White/ rare Lt Brown. Sing/ tr Mot. rare Crypto-/ mostly Micro- & VF Re-xln. xln and sucrosic por. tr Micro-/ VF subeuhedral xtals. Interbedded Friable/ Firm. some No/ tr & some Fair/ Good vis por.

DOL - mostly Tans & Off White. some Lt Gray, Lt Greenish Gray. Sing/ tr Mot. rare Crypto-/ mostly Micro- & tr VF Re-xln. xln, some vuggy and rare sucrosic por. mostly Micro-/ tr VF subeuhedral xtals. Interbedded Friable/ mostly Firm. No/ tr and some Fair vis por.





DOL - mostly Tans & Off White. some Lt Gray. Sing/ tr Mot. rare Crypto-/ some Micro- & mostly VF/F Re-xln. xln/ vuggy and rare sucrosic por. some Micro-/ mostly VF & F subeuhedral to rare euhedral xtals. Interbedded Friable & Firm. No/ tr and mostly Fair to Good vis por.

DOL - mostly Tans & Off White. some Lt Gray. Sing/ tr Mot. rare Crypto-/ some Micro- & mostly VF/F Re-xln. xln/ vuggy and rare sucrosic por. some Micro-/ mostly VF & F subeuhedral to rare euhedral xtals. Interbedded Friable & Firm. No/ tr and mostly Fair to Good vis por. rare pcs: Med Brown, spotted to uniform stian. No odor. No free oil or gas. No cut/ residual. No acid/ residual.

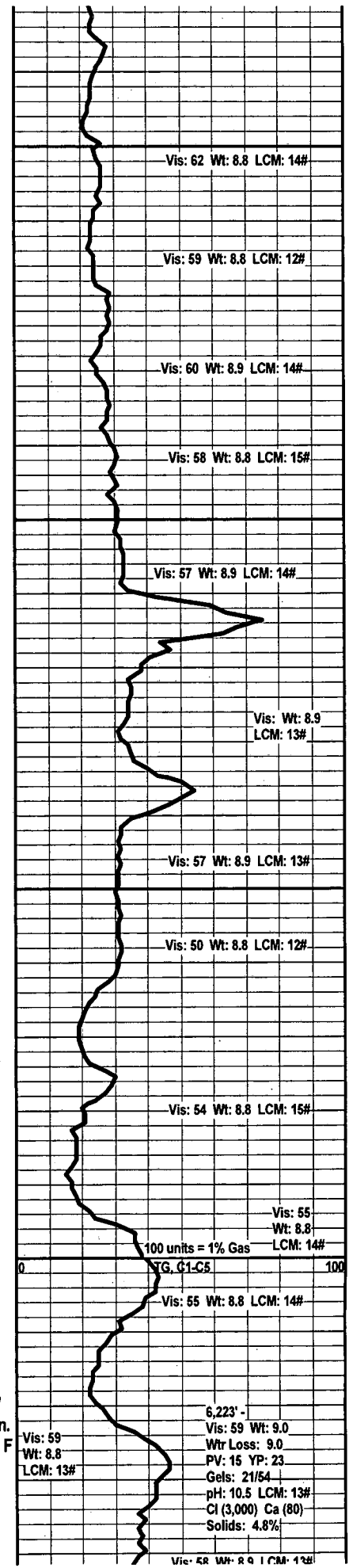
DOL - mostly Off White/ some Tan. tr Lt Gray. Sing/ tr Mot. rare Crypto-/ some Micro- & mostly VF/F Re-xln. xln/ vuggy and rare sucrosic por. some Micro-/ mostly VF & F subeuhedral to rare euhedral xtals. Interbedded Friable & Firm. No/ tr and mostly Fair to Good vis por. rare pcs: Med Brown, spotted to uniform stian. No odor. No free oil or gas. No cut/ residual. No acid/ residual.

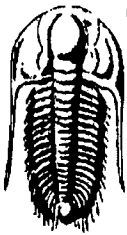
Add: DOL - Off White mottled with Pale Lt Green. rare Crypto-/ some Micro- Re-xln. xln por. Firm. No vis por.

Add few pcs: Siltstone - Pale Lt Green. Sing.

Add: CHERT - rare Clear/ mostly White & Off White. Semitransparent. tr, minutes dark specks. No tripolitic.

DOL - Pale Lt Gray/ Lt Gray. some Off White. Sing/ tr Mot. rare Crypto-/ some Micro- & some VF Re-xln. tr xln/ some vuggy por. some Micro-/ mostly VF & F subeuhedral to rare euhedral xtals. Interbedded Friable & Firm. No/ tr and mostly Fair to Good vis por.





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Woolsey Operating Company LLC

Hibbard #1SWD

125 N Market Ste 1000
Wichita KS 67202

23 34s 9w Harper

Job Ticket: 37407

DST#: 1

ATTN: Curtis Covey

Test Start: 2010.12.20 @ 02:22:50

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 08:28:45

Time Test Ended: 16:21:15

Test Type: **Conventional Bottom Hole**

Tester: **Esak Hadley**

Unit No: **34**

Interval: **5786.00 ft (KB) To 5827.00 ft (KB) (TVD)**

Reference Elevations: **1303.00 ft (KB)**

Total Depth: **5827.00 ft (KB) (TVD)**

1291.00 ft (CF)

Hole Diameter: **7.88 inches** Hole Condition: **Poor**

KB to GR/CF: **12.00 ft**

Serial #: 6773

Inside

Press@RunDepth: **2494.42 psig @ 5787.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.12.20**

End Date: **2010.12.20**

Last Calib.: **2010.12.20**

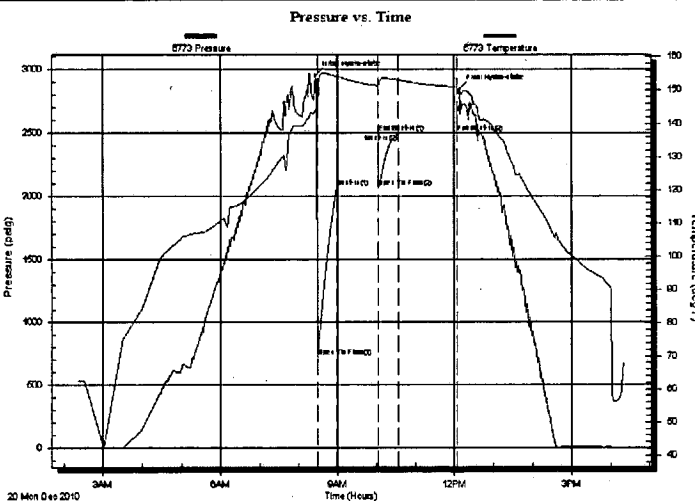
Start Time: **02:22:45**

End Time: **16:21:10**

Time On Btm: **2010.12.20 @ 08:26:09**

Time Off Btm: **2010.12.20 @ 12:08:25**

TEST COMMENT: IF Strong blow . BOB in 60 sec.
ISI Weak blow . Slow increase to 3".
FF Strong blow . BOB in 60 sec.
FSI Weak surface blow . No more than 1/4".



PRESSURE SUMMARY

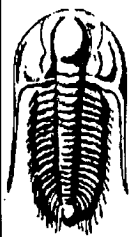
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2951.41	144.32	Initial Hydro-static
3	728.41	143.65	Open To Flow (1)
33	2070.12	154.18	Shut-In(1)
97	2502.23	151.35	End Shut-In(1)
97	2065.87	151.39	Open To Flow (2)
127	2494.42	153.15	Shut-In(2)
218	2502.38	150.99	End Shut-In(2)
223	2845.91	149.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
283.00	WCM 40%w 60%m	2.29
95.00	MCW 30%m 70%w	1.33
189.00	MCW 20%m 80%w Rw .23@63deg=35K	2.65
378.00	MCW 10%m 90%w	5.30
4055.00	MCW 5%m 95%w Rw .11@63deg=80K	56.88

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Operating Company LLC

Hibbard #1SWD

125 N Market Ste 1000
Wichita KS 67202

23 34s 9w Harper

Job Ticket: 37407

DST#: 1

ATTN: Curtis Covey

Test Start: 2010.12.20 @ 02:22:50

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 55.00 sec/qt
Water Loss: 9.58 in³
Resistivity: 0.00 ohm.m
Salinity: 4000.00 ppm
Filter Cake: 0.20 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
283.00	WCM 40%w 60%m	2.294
95.00	MCW 30%m 70%w	1.333
189.00	MCW 20%m 80%w Rw .23@63deg=35Kppm	2.651
378.00	MCW 10%m 90%w	5.302
4055.00	MCW 5%m 95%w Rw .11@63deg=80Kppm	56.881

Total Length: 5000.00 ft Total Volume: 68.461 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

