PETERRA
ENERGY SERVICES
CONSULTING FROM PROSPECT TO PIPELINE

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

Well Name: Hitz #2
API: 15-185-23965
Location: NE-NE-NW of Sec. 5-23s-12w
License Number: 5614
Region: Stafford County
Spud Date: 9/12/2016
Drilling Completed: 9/20/2016
Surface Coordinates: Longitude: -98.6659154
Latitude: 38.0852980
Bottom Hole Coordinates: Same as surface coordinates
Ground Elevation (ft): 1844'
K.B. Elevation (ft): 1849'
Logged Interval (ft): 2600' To: 3830'
Total Depth (ft): 3830'
Formation: Arbuckle @ Total Depth
Type of Drilling Fluid: Chemical Drispac : Mudco - Rick Hughes

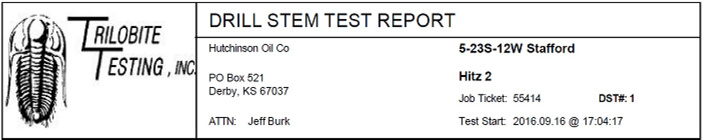
Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Hutchinson Oil Co.
Address: PO Box 521
Derby, KS
67037

GEOLOGIST

Name: Jeffrey A. Burk & Eli J. Felts
Company: PETERRA Energy Services
Address: 7701 E. Kellogg Drive
Suite #625
Wichita, KS 67607



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hutchinson Oil Co

PO Box 521
Derby, KS 67037

ATTN: Jeff Burk

5-23S-12W Stafford

Hitz 2

Job Ticket: 55414 DST#: 1

Test Start: 2016.09.16 @ 17:04:17

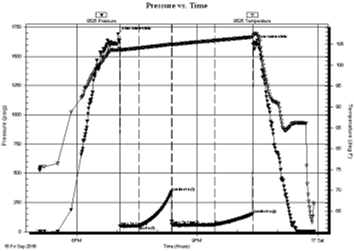
GENERAL INFORMATION:

Formation:	**Upper KC**		
Deviated:	No Whipstock: ft (KB)	Test Type:	Conventional Bottom Hole (Initial)
Time Tool Opened:	19:04:17	Tester:	Leal Cason
Time Test Ended:	23:54:47	Unit No:	74
Interval:	**3360.00 ft (KB) To 3402.00 ft (KB) (TVD)**	Reference Elevations:	1849.00 ft (KB)
Total Depth:	3402.00 ft (KB) (TVD)		1844.00 ft (CF)
Hole Diameter:	7.88 inches Hole Condition: Good	KB to GR/CF:	5.00 ft

Serial #: 8525 **Inside**

Press@RunDepth:	61.11 psig @ 3361.00 ft (KB)			Capacity:	8000.00 psig
Start Date:	2016.09.16	End Date:	2016.09.16	Last Calib.:	2016.09.16
Start Time:	17:04:17	End Time:	23:54:47	Time On Btm:	2016.09.16 @ 19:01:32
				Time Off Btm:	2016.09.16 @ 22:25:47

TEST COMMENT: IF: Fair Blow, Built to 9 1/2 inches
ISI: No Blow Back
FF: Weak Blow Built to 4 inches
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1692.33	103.64	Initial Hydro-static
3	49.38	103.61	Open To Flow(1)
32	49.71	104.13	Shut-In(1)
80	340.98	105.05	End Shut-In(1)
81	62.74	104.97	Open To Flow(2)
144	61.11	105.92	Shut-In(2)
202	154.43	106.79	End Shut-In(2)
205	1620.84	107.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	SGCM 55G 95%M	1.05

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hutchinson Oil Co

PO Box 521
Derby, KS 67037

ATTN: Jeff Burk

5-23S-12W Stafford

Hitz 2

Job Ticket: 55415 **DST#: 2**

Test Start: 2016.09.17 @ 06:51:20

GENERAL INFORMATION:

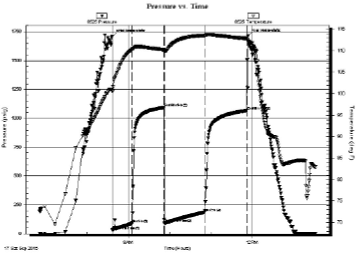
Formation:	**Lansing**		
Deviated:	No Whipstock: ft (KB)	Test Type:	Conventional Bottom Hole (Reset)
Time Tool Opened:	08:36:35	Tester:	Leal Cason
Time Test Ended:	13:32:20	Unit No:	74
Interval:	**3400.00 ft (KB) To 3425.00 ft (KB) (TVD)**	Reference Elevations:	1849.00 ft (KB)
Total Depth:	3425.00 ft (KB) (TVD)		1844.00 ft (CF)
Hole Diameter:	7.88 inches Hole Condition: Good	KB to GR/CF:	5.00 ft

Serial #: 8525 **Inside**

Press@RunDepth:	187.14 psig @ 3401.00 ft (KB)			Capacity:	8000.00 psig
Start Date:	2016.09.17	End Date:	2016.09.17	Last Calib.:	2016.09.17
Start Time:	06:51:20	End Time:	13:32:20	Time On Btm:	2016.09.17 @ 08:36:20

Time Off Btm: 2016.09.17 @ 11:53:50

TEST COMMENT: IF: Fair Blow, BOB in 22 minutes
ISI: No Blow Back
FF: Fair Blow, BOB in 27 minutes
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1707.28	100.97	Initial Hydro-static
1	31.15	100.52	Open To Flow(1)
29	88.18	110.33	Shut-In(1)
76	1093.43	110.25	End Shut-In(1)
76	91.04	109.93	Open To Flow(2)
135	187.14	113.55	Shut-In(2)
196	1067.74	112.84	End Shut-In(2)
198	1710.92	112.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
315.00	Water	4.42
30.00	MCW 24%M 76%W	0.42

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Hutchinson Oil Co

PO Box 521
Derby, KS 67037

ATTN: Jeff Burk

5-23S-12W Stafford

Hitz 2

Job Ticket: 55416 **DST#: 3**

Test Start: 2016.09.18 @ 02:15:37

GENERAL INFORMATION:

Formation: **KC**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:52:22
Time Test Ended: 08:46:07

Test Type: Conventional Bottom Hole (Reset)
Tester: Leal Cason
Unit No: 74

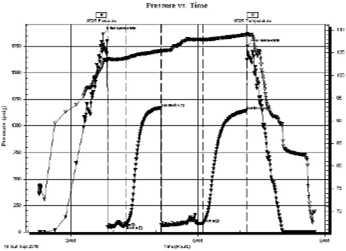
Interval: 3481.00 ft (KB) To 3550.00 ft (KB) (TVD)
Total Depth: 3550.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1849.00 ft (KB)
1844.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8525 **Inside**

Press@RunDepth:	82.27 psig @ 3482.00 ft (KB)			Capacity:	8000.00 psig
Start Date:	2016.09.18	End Date:	2016.09.18	Last Calib.:	2016.09.18
Start Time:	02:15:37	End Time:	08:46:07	Time On Btm:	2016.09.18 @ 03:45:37
				Time Off Btm:	2016.09.18 @ 07:10:22

TEST COMMENT: IF: Weak Blow, Built to 3 inches
ISI: No Blow Back
FF: Weak Blow, Built to 3 inches
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1868.14	102.77	Initial Hydro-static
7	48.03	103.35	Open To Flow(1)
34	60.48	103.81	Shut-In(1)
82	1172.58	105.46	End Shut-In(1)
83	66.50	105.23	Open To Flow(2)
142	82.27	107.91	Shut-In(2)
204	1144.44	108.96	End Shut-In(2)
205	1751.81	109.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	VSOSM -1%O +99%M	1.26

* Recovery from multiple tests

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hutchinson Oil Co

PO Box 521
Derby, KS 67037

ATTN: Jeff Burk

5-23S-12W Stafford

Hitz 2

Job Ticket: 55417 **DST#: 4**

Test Start: 2016.09.19 @ 02:25:27

GENERAL INFORMATION:

Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:57:57

Time Test Ended: 08:08:42

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 74

Interval: 3718.00 ft (KB) To 3750.00 ft (KB) (TVD)

Total Depth: 3750.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1849.00 ft (KB)
1844.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8525 **Inside**

Press@RunDepth: 41.87 psig @ 3719.00 ft (KB)

Start Date: 2016.09.19 End Date: 2016.09.19

Start Time: 02:25:27 End Time: 08:08:42

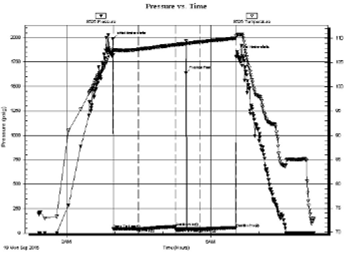
Capacity: 8000.00 psig

Last Calib.: 2016.09.19

Time On Btm: 2016.09.19 @ 03:57:42

Time Off Btm: 2016.09.19 @ 06:32:12

TEST COMMENT: IF: Weak 3 1/2 inch Blow
ISI: No Blow Back
FF: Weak Surface Blow, Died Immediately, Flushed Tool, No Blow
FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1988.47	107.33	Initial Hydro-static
1	42.23	106.56	Open To Flow(1)
32	41.77	107.73	Shut-In(1)
78	66.99	108.66	End Shut-In(1)
78	42.11	108.66	Open To Flow(2)
91	1636.58	109.47	Flushed Tool
109	41.87	109.27	Shut-In(2)
154	55.23	110.02	End Shut-In(2)
155	1849.42	110.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud	0.42

* Recovery from multiple tests

Gas Rates

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

Operator:	Hutchinson Oil Co.		
Well Name:	Hitz #2		
API #:	15-185-23965		
Location:	NE NE NW of Sec. 5 23s 12w		
County:	Stafford	State:	Kansas
Elevation:	1844 GL	1849	KB

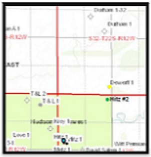
PETERRA
ENERGY SERVICES
CONSULTING FROM PROSPECT TO PIPELINE

Jeffrey A. Burk & Eli J. Felts

Consulting Petroleum Geologists

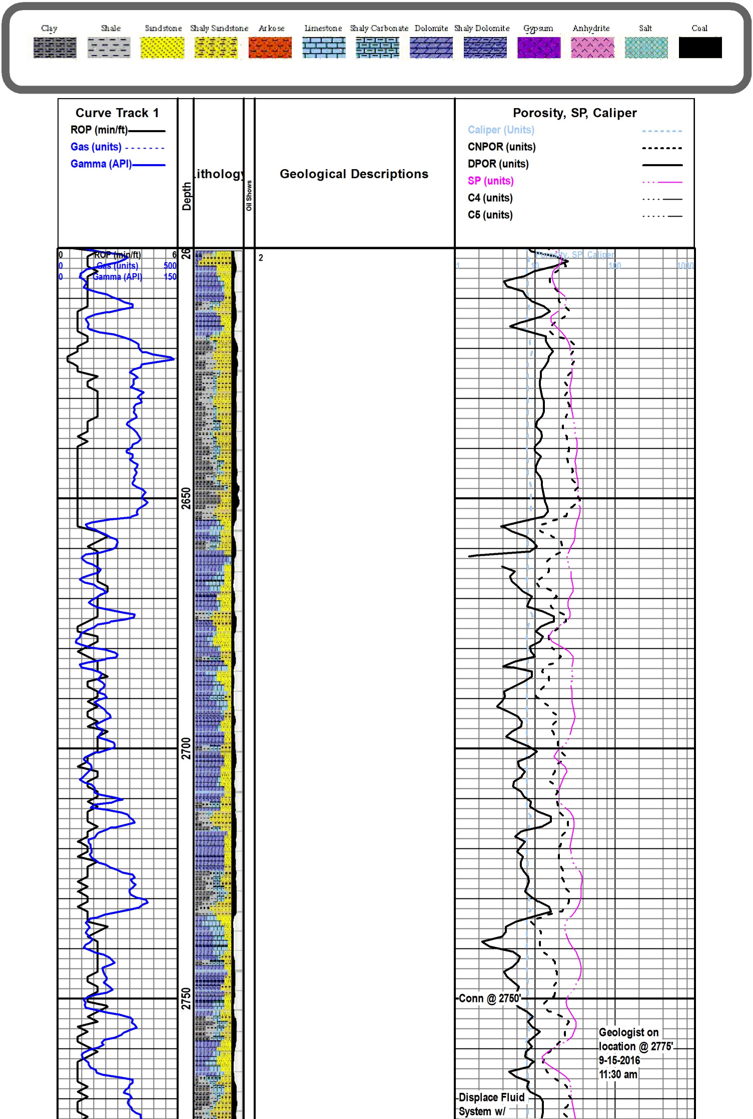
SAMPLE TOPS

Formation	Depth	Datum
Anhydrite Top	655	1194
Anhydrite Base	685	1164
Topeka	2910	-1061
Heebner	3185	-1336
Toronto	3201	-1352
Douglas	3219	-1370
Brown Lime	3321	-1472
Lansing	3337	-1488
BKC	3580	-1731
Upper Viola Chert	3620	-1771
Lower Viola	3651	-1802
Simpson	3719	-1870
Arbuckle	3771	-1922



REFERENCE WELLS   E-LOG TOPS

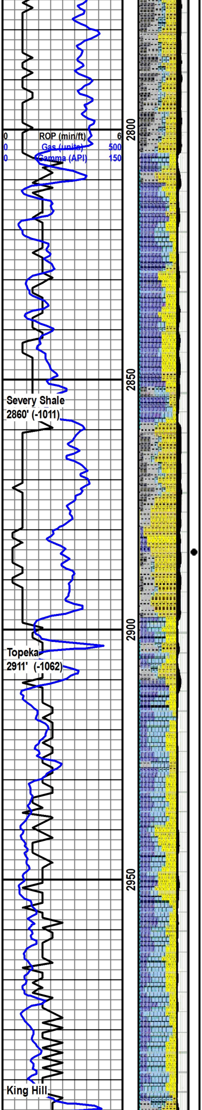
FORMATION	Hitz =2		Quick Structural Reference			DeWerff		T&L #1		Hitz =1	
	Hutchinson Oil Co.		Hitz #2			Globe Operating, Inc.		Hutchinson Oil Co.		Huchinson Oil Co.	
	Elevation: 1849 KB		DeWerff	T&L #1	Hitz #1	Elevation: 1852 KB		Elevation: 1854 KB		Elevation: 1849 KB	
Anhydrite Top	653	1196	+.0)	+4.0)	+21.0)	656	1196	662	1192	674	1175
Anhydrite Base	683	1166	(-1.0)	+1.0)	+11.0)	685	1167	689	1165	694	1155
Topeka	2911	-1062	(-4.0)	+2.0)	+.0)	2910	-1058	2918	-1064	2911	-1062
Heebner Shale	3184	-1335	(-7.0)	+1.0)	+3.0)	3180	-1328	3190	-1336	3187	-1338
Toronto LS	3201	-1352	(-8.0)	+.0)	+3.0)	3196	-1344	3206	-1352	3204	-1355
Douglas Shale	3217	-1368	(-6.0)	+.0)	+1.0)	3214	-1362	3222	-1368	3218	-1369
Brown Lime	3320	-1471	(-9.0)	(-2.0)	+1.0)	3314	-1462	3323	-1469	3321	-1472
Lansing	3339	-1490	(-10.0)	(-2.0)	+7.0)	3332	-1480	3342	-1488	3346	-1497
BKC	3582	-1733	(-10.0)	(-3.0)	+4.0)	3575	-1723	3584	-1730	3586	-1737
Upper Viola Chert	3622	-1771	(-15.0)	(-22.0)	NA	3608	-1756	3603	-1749	NA	NA
Lower Viola	3651	-1802	(-41.0)	(-28.0)	(-29.0)	3613	-1761	3628	-1774	3622	-1773
Simpson Shale	3717	-1868	(-6.0)	(-6.0)	(-30.0)	3714	-1862	3687	-1833	3687	-1838
Arbuckle	3770	-1921	(-7.0)	(-27.0)	(-16.0)	3766	-1914	3748	-1894	3754	-1905



Conn @ 2750'

Geologist on
location @ 2775'
9-15-2016
11:30 am

Displace Fluid
System w/



LS - crm, v. fn xln in mst, smooth txt w/ sm re-xln, svrl crm-med xln, granular & foss txt

LS -crm to gry, med xln w/ granular txt, foss, some w/ re-xln spar (few larger xln)

LS- crm-gry to brown, mst fn xln, argil in part, oa dns, fw re-xln spar veins

SH - gry, silty to v fn grn sandy

SH - gry, aa, more pcs sandy, v fn grained, well rnd/srted, few pyritic

SS - gry app, v fn grained, well rounded & sorted, sl. friable clusters, dirty matrix, spotted fluor w/ duller fluorescence on break, no vis gas, slow weeping milky stream on break

SS - gry appearance, v. fn sand grains w/ abdt org & grn shl incl. bright yellow fluor, no vis gas, nsfo

LS - crm to wht, med xln, sl granular texture, few foss

LS - crm to wht, med xln, granular txt, foss, some chalky

LS - crm to gry, med xln, granular, abdt foss & chalk, few mnrl stn edges

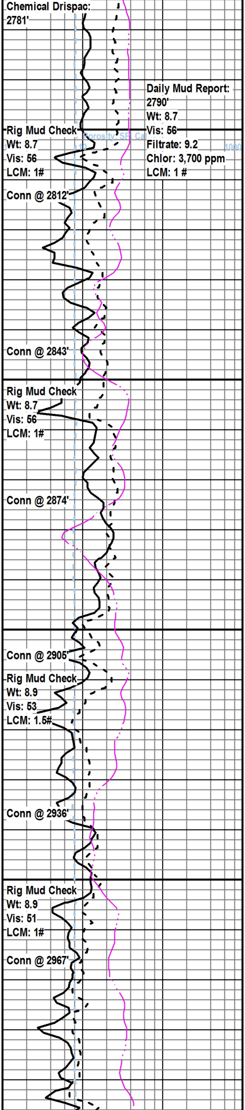
LS, aa, few w/ pp porosity w/ pyrite, few loose pyrite in larger xln

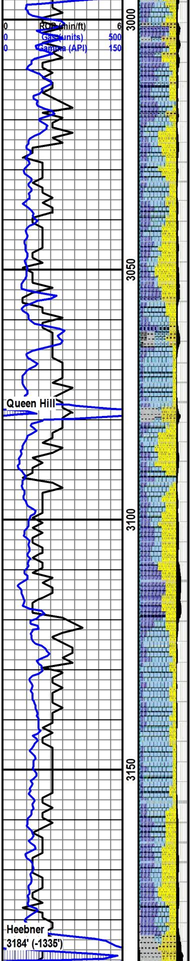
LS - crm to gry, mst med xln & foss, few pcs gry, v fn xln w/ spic & foss frags, sharp edges, few w/ large re-xln banding

LS -crm to gry, med xln, granular & fossiliferous txture w/ abdt foss, sm med brown mnrl stn.

LS - crm-gry to tan, med xln, v. similar aa, increase in mnrl staining, darker brown stn than above

LS - crm to gry, med xln, abdt foss, abdt chalk (1) pc dark brown, blocky & v. dns





LS - crm & mst gry, med xln, foss, abdt
CH - gry, sharp, fresh & foss

LS - crm to gry, few tan, mst fn-med xln, abdt foss, many pcs w/ re-xln sparr dev. chalky

LS - crm to gry, aa, pyritic dev

LS - gry, fn xln, dns few w/ pp pyritic dev, several w/ re-xln spar

LS - crm-gry, fn xln, dns w/ abdt pyrite dev, abdt large xln spar porosity, nsfo, no odor, no fluor

LS - crm- tan, fn-med xln, mst granular txt w/ drk brown mnrl stn

LS - crm-tan, med xln, granular txt, hvy foss

LS - gry, fn xln, dns & blocky, abdt foss, argill app//silty

LS - crm-gry, fn med xln, chalky & cherty throughout

SH - v. dark brown, earthy, micac shimmer, chalky edges

LS - crm, med xln, grnlr txt, abdt chalk

LS - crm-gry, few lt brown, blocky, dns, several pcs SH - gry, silty

LS - crm - lt tan, sat stned appearrance w/ sl sucr. xln txture, no fluor, no odor, nsfo

LS- crm, fn-med xln, v. small chips in samples, some re-lxn spar dev

LS - crm - med xln w/ chalky app, lithographic w/ abdt dk brwn-brk red staining throughout

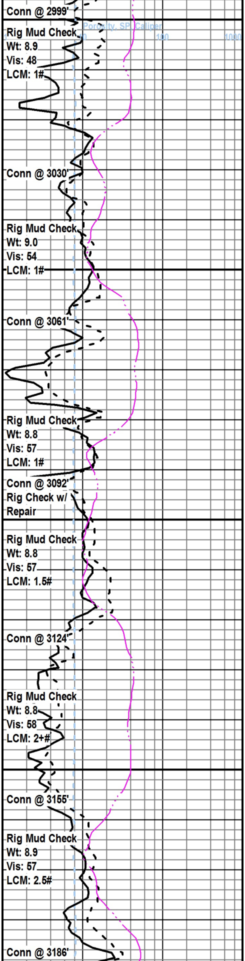
LS - crm-tan, fn to v. fn xln, edge drk gry mineral stn, oa blocky & dns

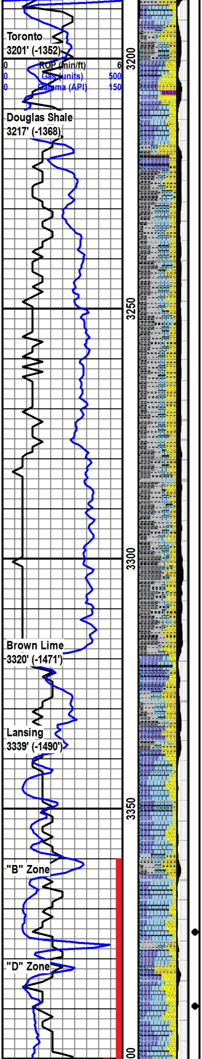
LS - crm-tan, fn xln, aa, few pcs crm w/ v. fn inerxln porosity, v. drk tarry residual stn

LS - crm-tan, fn-med xln, abdt stn on edges, v. dark, residual ap

LS, aa, & SH - gry, silty, few chalk

SH - drk, earthy, bleeds gas





Toronto
3201' (-1352')

Douglas Shale
3217' (-1368')

Brown Lime
3320' (-1471')

Lansing
3339' (-1490')

"B" Zone

"D" Zone

SH - v dark brown, earthy, hvy gas bleed

LS - crm to lt tan, med xln, few foss, abdt chalk

LS - crm to buff, md xln, foss, fw pcs w/ re-xln spar & pp pyrite dev

SH - gry-grn, soft

SH - gry-grn, soft, sm micaceos, few mott grn-gry, tr. pyrite

SH - gry - grn - sl sandy few brk red,soft & silty

SH - lt gry-gry, soft, few grn, wxy

SH - gry, soft, blocky ap, sm silty w/ micac. some gry, sft, globular to msh

SH - mst aa, few drk gry, smooth, firm, sm pcs w/ sl sandy, mst silty

SH - gry - grn, few drk gry, laminated, firm to dns

SH - lt to med gry, oa smooth, sm vis laminated

SH - gry , aa, few dark, blocky & dns

SH - gry -grn, few dark, mst soft ,silty, few darker, dns

LS - brown, fn xln, blocky, sm foss, few sl. re-min, oa dns

LS - drk gry-brown, v. fn xln, lithographic & v. dense, no vis porosity

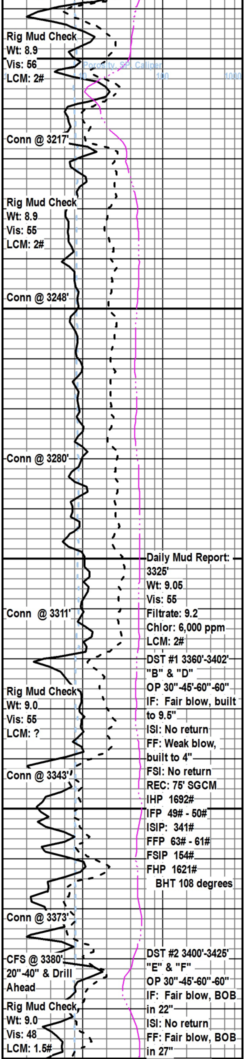
LS - crm to wht, med xln, granular & foss txture, chalky in part, sl brittle

LS - crm to buff, med xln, hvy granular txt w/ some edge pp porosity & dark edge staining, dns, no odor

SH- mst gry and/or shades of gray, few sl foss

LS - crm to tan, mst fn xln, foss in part, fair dev inner xln (sparrite) porosity, sl sh lt free oil & gas bubbles, few dark free oil droplets, good odor, spotty, dull fluor

LS - tan to gry, mst fn xln, foss (scattered) in part, sl dev of pp to vgy inner xln porosity, few shly, sli sh dark free oil, fair odor, spotty dull flour.



Rig Mud Check
Wt: 8.9
Vis: 56
LCM: 2#

Conn @ 3217'

Rig Mud Check
Wt: 8.9
Vis: 55
LCM: 2#

Conn @ 3248'

Conn @ 3280'

Daily Mud Report:
3325'
Wt: 9.05
Vis: 55
Filtrate: 9.2
Chlor: 6,000 ppm
LCM: 2#

Conn @ 3311'

DST #1 3360'-3402'
"B" & "D"
OP 30"-45'-60"-60"
IF: Fair blow, built to 9.5"
ISI: No return
FF: Weak blow, built to 4"
FSI: No return
REC: 75' SGCM
IHP 1692#
IFP 49# - 50#
ISIP: 341#
FFP 63# - 61#
FSIP 154#
FHP 1621#
BHT 108 degrees

Rig Mud Check
Wt: 9.0
Vis: 55
LCM: ?

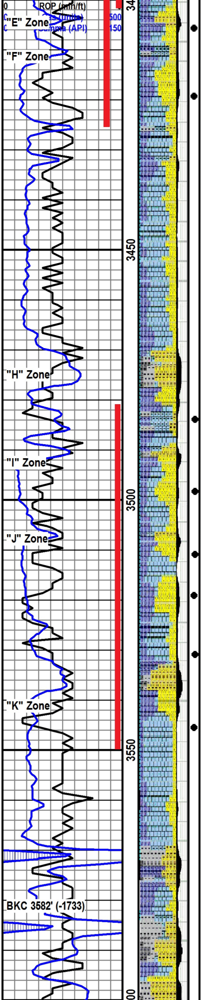
Conn @ 3343'

Conn @ 3373'

CFS @ 3380'
20"-40" & Drill Ahead

DST #2 3400'-3425'
"E" & "F"
OP 30"-45'-60"-60"
IF: Fair blow, BOB in 22"
ISI: No return
FF: Fair blow, BOB in 27"

Rig Mud Check
Wt: 9.0
Vis: 48
LCM: 1.5#



LS - tan, hvy foss, gd intrafoss re-xln porosity, gd show dark brown free oil & gas, good odor, fair spotted yellow flour

LS - cream, med xln w/ chalky texture, no vis por, no odor, nsfo

LS - crm, med xln w/ foss & intrafoss re-xln porosity, sm ool-oom porosity w/ re-xln banding, good show lt brown free oil, fair show vis gas, dull fluor

LS - cm to gry, med xln w/ abdt foss, gd intra foss re-xln porosity, barren, sm pcs scat gils stn, no odor

LS - crm, med xln, chalky appearance, some lg calcite xln, scattered CH - sharp, wht, sm w/ foss (frags & spic)

LS - crm, med xln, chalky app, oa lithographic, svrl pcs w/ edge stn, dark, gilsinitic, no odor

LS - crm, med xln, fw large calc. barren, scatt CH - wht to translucent, mst sharp, fresh, foss V. fn sample chips

LS - crm to lt gry, fn-med xln, hvy foss, few intra foss re-xln porosity, nsfo

LS - crm to lt tan, med xln, highly ooc w/ gd inner xln & ooc porosity, gd satd stn & show lt brown - golden free oil,

LS - crm, highly fossiliferous to ool w/ scattered inner xln to inner oolitic porosity, gd odor, gd show light brown - gld free oil, some pcs w/ darker, asphaltic oil bleeds gas

LS - tan, fn xln, hvy oolitic w/ small ool, poor intra-ool porosity w/ sl show lt brown free oil, fair odor, sptd yellow fluorescence

LS - wht-crm, med xln, hvy ool w/ chalky txture, abdt pp porosity w/ poor innerconnectability, bleeds gas and lt brown free oil, dull yellow fluor w/ gd streaming cut

LS - crm-tn, fn-med xln, hvy ool txture w/ foss frags, gd intra foss porosity w/ some intra foss spar, good odor w/ gd show lt brown-gld free oil, instant streaming cut

LS- crm, med xln, highly ooc w/ sm to large ooc, drk saturated stn w/ gd show lt brown free oil & gas, dull yellow fluor w/ instant cut

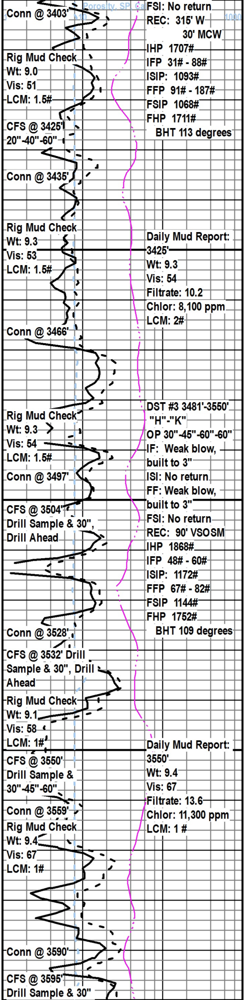
LS - crm-gry, v. fn xln, dns, sm w/ chalky edges, v. poor to no vis porosity, rare pp w/ pyrite

LS - tan - lt gry, v. fn xln, few w/ vis fracs - chalky edges, ooc to foss, dense, poor to no vis porosity

SH - drk, blk, carbonaceous, no visible gas

LS - tan to lt brown, med xln, granular fossiliferous txture,

SH - gry to drk gry, few w/ argill LS - crm to tan, med xln, scatt foss



Conn @ 3403'

Rig Mud Check
Wt: 9.0
Vis: 51
LCM: 1.5#

CFS @ 3425'
20"-40"-60"

Conn @ 3435'

Rig Mud Check
Wt: 9.3
Vis: 53
LCM: 1.5#

Conn @ 3466'

Rig Mud Check
Wt: 9.3
Vis: 54
LCM: 1.5#

Conn @ 3497'

CFS @ 3504'
Drill Sample & 30", Drill Ahead

Conn @ 3528'

CFS @ 3532' Drill Sample & 30", Drill Ahead

Rig Mud Check
Wt: 9.1
Vis: 58
LCM: 1#

CFS @ 3550'
Drill Sample & 30"-45"-60"

Conn @ 3559'

Rig Mud Check
Wt: 9.4
Vis: 67
LCM: 1#

Conn @ 3590'

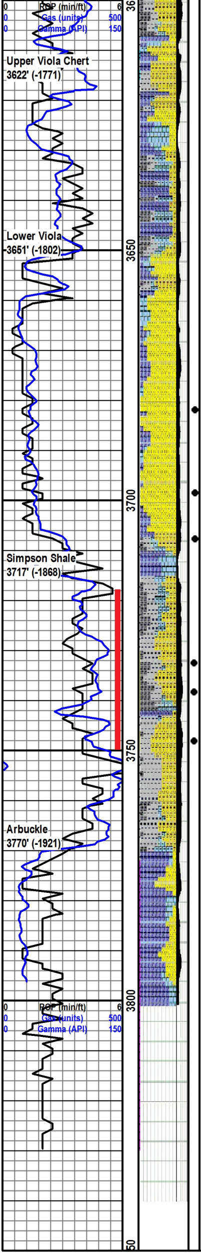
CFS @ 3595'
Drill Sample & 30"

FSI: No return
REC: 315' W
30' MCW
IHP 1707#
IFP 31# - 88#
ISIP: 1093#
FFP 91# - 187#
FSIP 1068#
FHP 1711#
BHT 113 degrees

Daily Mud Report:
3425'
Wt: 9.3
Vis: 54
Filtrate: 10.2
Chlor: 8,100 ppm
LCM: 2#

DST #3 3481'-3550'
"H"-"K"
OP 30"-45"-60"-60"
IF: Weak blow, built to 3"
ISI: No return
FF: Weak blow, built to 3"
FSI: No return
REC: 90' VSOSM
IHP 1868#
IFP 48# - 60#
ISIP: 1172#
FFP 67# - 82#
FSIP 1144#
FHP 1752#
BHT 109 degrees

Daily Mud Report:
3550'
Wt: 9.4
Vis: 67
Filtrate: 13.6
Chlor: 11,300 ppm
LCM: 1 #



Upper Viola Chert
3622' (-1771)

Lower Viola
3651' (-1802)

Simpson Shale
3717' (-1868)

Arbuckle
3770' (-1921)

SH - red & gry, mushy globular txture; sticky

LS - crm to tan, mst med xln, few foss, some w/ transition pcs- shaley, gry

CH - wht w/ some blk app, granular to sandy txture w/ trippolitic porosity, sm pcs bleed gas & drk oil

SH - lt gry-grnish tint, soft to mushy & sticky

SH - gry to grn, mottled w/ maroon, few scatt LS - crm, md xln w/ chalky txture, no vis porosity

CH - wht to crm- sm translucent-orng, sharp w/ concoidal to blocky break, many dark w/ asphaltic staining, fair odor, bleeds gas

CH - wht to crm & translucent, sharp & fresh some w/ trans trippolitc, sm pcs blk w/ granular-tripp txture, good odor; bleeds gas

CH - bone white, sharp & blocky, fresh, few fractured w/ drk asph staining in fracs and along edges, few pcs transition to lt brown, dol app, bleeding lt brown free oil & gas

CH - bone wht to sl cream, sharp & blocky, many pcs brown, granular txture, bleed lt brown free oil & bubble gas

CH - bone wht to sl cream, sharp & blocky, many pcs brown, granular txture, bleed lt brown free oil & bubble gas, bright ylw fluor

CH, aa & SS - wht clusters w/ grnish hue, well rounded, poorly sorted, sm w/ grn, glauconitic matrix, few bubble gas, fair odor

SH - lt grn, waxy & sl. slippery & SS - wht to sl grn app w/ clr qtz grains, well rnded, poorly sorted grns, abdt glauc, & drk stn, friable in most, free oil in tray, lt, golden brown, abdt free oil on break, slow, weeping cut, dull yellow fluor

SS - gry to grn appearance, clear qtz grains, sub-rnd to sub-angular, poorly sorted, dolomitic in most w/ abdt glauconite, dark staining through many, few pcs friable, sharp odor, sptd ylw fluor, fair show gld-brwn free oil, instant cut, few gas bubbles

SS - aa, SH - grn, waxy, sl slippery, laminated

SH - grn, aa, some gry-lt brown, few black, some pcs mottled, traces pyrite

SH - as above, gry-grn abundant w/ few brk-gry, mottled, few pcs SS-wht app, argillaceous, some dark stn & drk inclustions

Dol - crm-pinkish hue, fn xln, v. slght HCL reaction, v faint odor, no visible gas, few sanddy, friable, fair sorted, nsfo

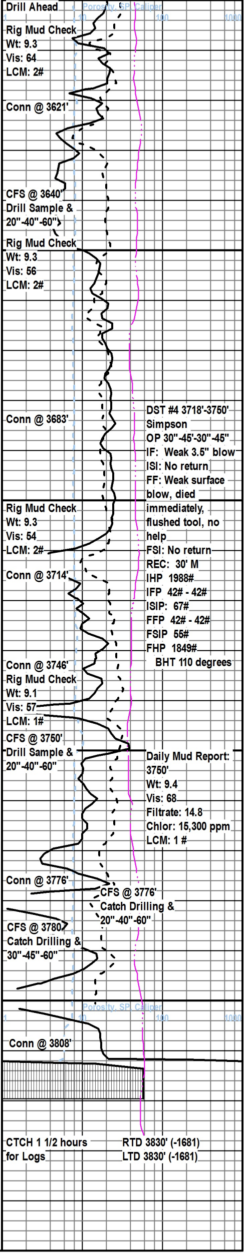
Dol - crm, med xln w/ rhombic xln, hvy ooc porosity, barren, v. fnt sulf odor on break, nsfog

Dol- crm-pinkish hue, med to coarse xln w/ ooc porosity in transitional pcs, barren porosity, no vis residual stn v. fnt odor, nsfog

Dol - crm to lt tan, med xln, barren porosity, no odor, no show free oil, fw pcs Dol-wht, v. fn xln, friable; barren

Dol - crm to lt tan, med-coarse xln, few pcs w/ pink hue, barren porosity, no odor, nsfo

Dol - crm to tan, med-coarse xln, some pink hue, barren, aa, nsfo



Drill Ahead

Rig Mud Check
Wt: 9.3
Vis: 64
LCM: 2#

Conn @ 3621'

CFS @ 3640'
Drill Sample &
20"-40"-60"

Rig Mud Check
Wt: 9.3
Vis: 56
LCM: 2#

Conn @ 3683'

DST #4 3718'-3750'
Simpson
OP 30"-45'-30"-45"
IF: Weak 3.5" blow
ISI: No return
FF: Weak surface blow, died immediately, flushed tool, no help
FSI: No return
REC: 30' M
IHP 1988#
IFP 42# - 42#
ISIP: 67#
FFP 42# - 42#
FSIP 55#
FHP 1849#
BHT 110 degrees

Rig Mud Check
Wt: 9.3
Vis: 54
LCM: 2#

Conn @ 3714'

Conn @ 3746'
Rig Mud Check
Wt: 9.1
Vis: 57
LCM: 1#

CFS @ 3750'
Drill Sample &
20"-40"-60"

Daily Mud Report:
3750'
Wt: 9.4
Vis: 68
Filtrate: 14.8
Chlor: 15,300 ppm
LCM: 1 #

Conn @ 3776'

CFS @ 3776'
Catch Drilling &
20"-40"-60"

CFS @ 3780
Catch Drilling &
30"-45"-60"

Conn @ 3808'

CTCH 1 1/2 hours
for Logs

RTD 3830' (-1681)
LTD 3830' (-1681)