



Scale 1:240 Imperial

Well Name: Schneider Unit #1-18
 Surface Location: 2617' FNL, 704' FEL, Sec. 18-18S-14W
 Bottom Location:
 API: 15-009-26157-0000
 License Number:
 Spud Date: 11/18/2016 Time: 8:15 PM
 Region: Barton County
 Drilling Completed: 11/25/2016 Time: 11:15 AM
 Surface Coordinates:
 Bottom Hole Coordinates:
 Ground Elevation: 1937.00ft
 K.B. Elevation: 1948.00ft
 Logged Interval: 2800.00ft To: 3600.00ft
 Total Depth: 3600.00ft
 Formation: Arbuckle
 Drilling Fluid Type: Chemical/Fresh Water Gel

OPERATOR

Company: Shelby Resources, LLC
 Address: 621 17th St, Suite 1155
 Denver, CO 80293
 Contact Geologist: Janine Sturdavant
 Contact Phone Nbr: 303-907-2209 / 720-274-4682
 Well Name: Schneider Unit #1-18
 Location: 2617' FNL, 704' FEL, Sec. 18-18S-14W
 API: 15-009-26157-0000
 Pool:
 State: Kansas Field: Schneider
 Country: USA

LOGGED BY



Company: Shelby Resources, LLC
 Address: 621 17th St, Suite 1155
 Denver, CO 80293
 Phone Nbr: 203-671-6034
 Logged By: Geologist Name: Jeremy Schwartz

NOTES

The Shelby Resources, LLC Schneider Unit #1-18 was drilled to a total depth of 3600', bottoming in the Arbuckle. A TookeDaq gas detector was employed in the drilling of said well.

4 DST's were conducted throughout the Lansing-Kansas City and Arbuckle Zones. The DST Reports can be found at the bottom of this log. **Note: DST #2 was a misrun and thus an invalid test due to plugging of the test tool**

Due to positive DST Results in the Arbuckle, sample shows, gas kicks, and log analysis it was determined by all parties involved to further test the well through production casing. The dry samples were saved and will be available for further review at the Kansas Geological Society Well Sample Library, located in Wichita, KS.

Respectfully Submitted,
Jeremy Schwartz
Geologist

CONTRACTOR

Contractor: Sterling Drilling Co

Rig #: 5
 Rig Type: mud rotary
 Spud Date: 11/18/2016
 TD Date: 11/25/2016
 Rig Release:

Time: 8:15 PM
 Time: 11:15 AM
 Time:








ELEVATIONS

K.B. Elevation: 1948.00ft Ground Elevation: 1937.00ft
 K.B. to Ground: 11.00ft

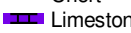
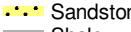

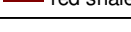
DATE	DEPTH	ACTIVITY
Monday, November 21, 2016	3120'	Geologist Jeremy Schwartz on location @ 1630hrs, ~3145', drlg ahead through
		Heebner, Toronto, Douglas Shale, Brown Lime, CFS @ 3231', drop survey,
	3231'	strap out, conduct bit trip,
Tuesday, November 22, 2016	3232'	Successful bit trip, resume drlg ahead through Lansing, CFS @ 3283', resume drlg,
	3318'	CFS @ 3318', conduct DST #1 in Lansing "A-G", Successful Test, resume drlg,
Wednesday, November 23, 2016	3410'	CFS @ 3410', resume drlg, CFS @ 3461', conduct DST #2 in Lansing "H-K"
	3461'	MISRUN, Invalid Test due to plugging, trip back in hole, run 1/2 tank mud, CTCH 2hrs
Thursday, November 24, 2016	3510'	resume drlg ahead, CFS @ 3510', conduct DST #3 in the Arbuckle,
		successful test, reversed out 2881' CGO, resue drlg, CFS @ 3520', conduct DST #4
	3520'	in the Arbuckle,
Friday, November 25, 2016	3520'	successful test, drill ahead to TD, TD of 3600' reached @ 1115hrs, CTCH 1.5hrs,
	3600'	drop survey, conduct logging operations, logging operations complete @ 1800hrs
		Geologist Jeremy Schwartz off location @ 1855hrs

FORMATION	OIL - P&A										OIL - P&A						
	PETRO-MARK EXPLORATION										ICER ADDIS						
	SCHNEIDER #18-1										HELEN SCHNEIDER #1						
	SCHNEIDER UNIT #1-18					NW-NW-SE 18-18S-14W					NE-SW-NE 18-18S-14W						
	KB		1948			KB		1932			KB		1936				
LOG TOPS		SAMPLE TOPS			COMP. CARD		LOG		SMPL.		COMP. CARD		LOG		SMPL.		
DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.
ANHYDRITE TOP	944	1004	945	1003	927	1005	-	1	-	2	939	997	+	7	+	6	
BASE	970	978	972	976	956	976	+	2	+	0	969	967	+	11	+	9	
TOPEKA	2944	-996	2944	-996	2934	-1002	+	6	+	6	2936	-1000	+	4	+	4	
QUEEN HILL SHALE	3073	-1125	3072	-1124	3064	-1132	+	7	+	8	3066	-1130	+	5	+	6	
HEEBNER SHALE	3157	-1209	3157	-1209	3152	-1220	+	11	+	11	3152	-1216	+	7	+	7	
TORONTO	3171	-1223	3172	-1224	3164	-1232	+	9	+	8	3166	-1230	+	7	+	6	
DOUGLAS SHALE	3185	-1237	3184	-1236	3180	-1248	+	11	+	12	3180	-1244	+	7	+	8	
BROWN LIME	3229	-1281	3229	-1281	3224	-1292	+	11	+	11	3224	-1288	+	7	+	7	
LKC	3237	-1289	3237	-1289	3231	-1299	+	10	+	10	3232	-1296	+	7	+	7	
LKC G POROSITY	3309	-1361	3309	-1361	3303	-1371	+	10	+	10	3306	-1370	+	9	+	9	
MUNCIE CREEK	3366	-1418	3369	-1421	3366	-1434	+	16	+	13	3363	-1427	+	9	+	6	
LKC H	3374	-1426	3377	-1429	3374	-1442	+	16	+	13	3372	-1436	+	10	+	7	
BKC	3456	-1508	3456	-1508	3454	-1522	+	14	+	14	3454	-1518	+	10	+	10	
ARBUCKLE	3495	-1547	3495	-1547	3487	-1555	+	8	+	8	3496	-1560	+	13	+	13	
RTD			3600	-1652	3497	-1565				87	3502	-1566					86
LTD	3602	-1654			3494	-1562	-	92			3500	-1564	-	90			




ROCK TYPES









 Congl
  Lmst fw<7
  shale, gry
  shale, red
 Dolprim
  shale, grn
  Carbon Sh

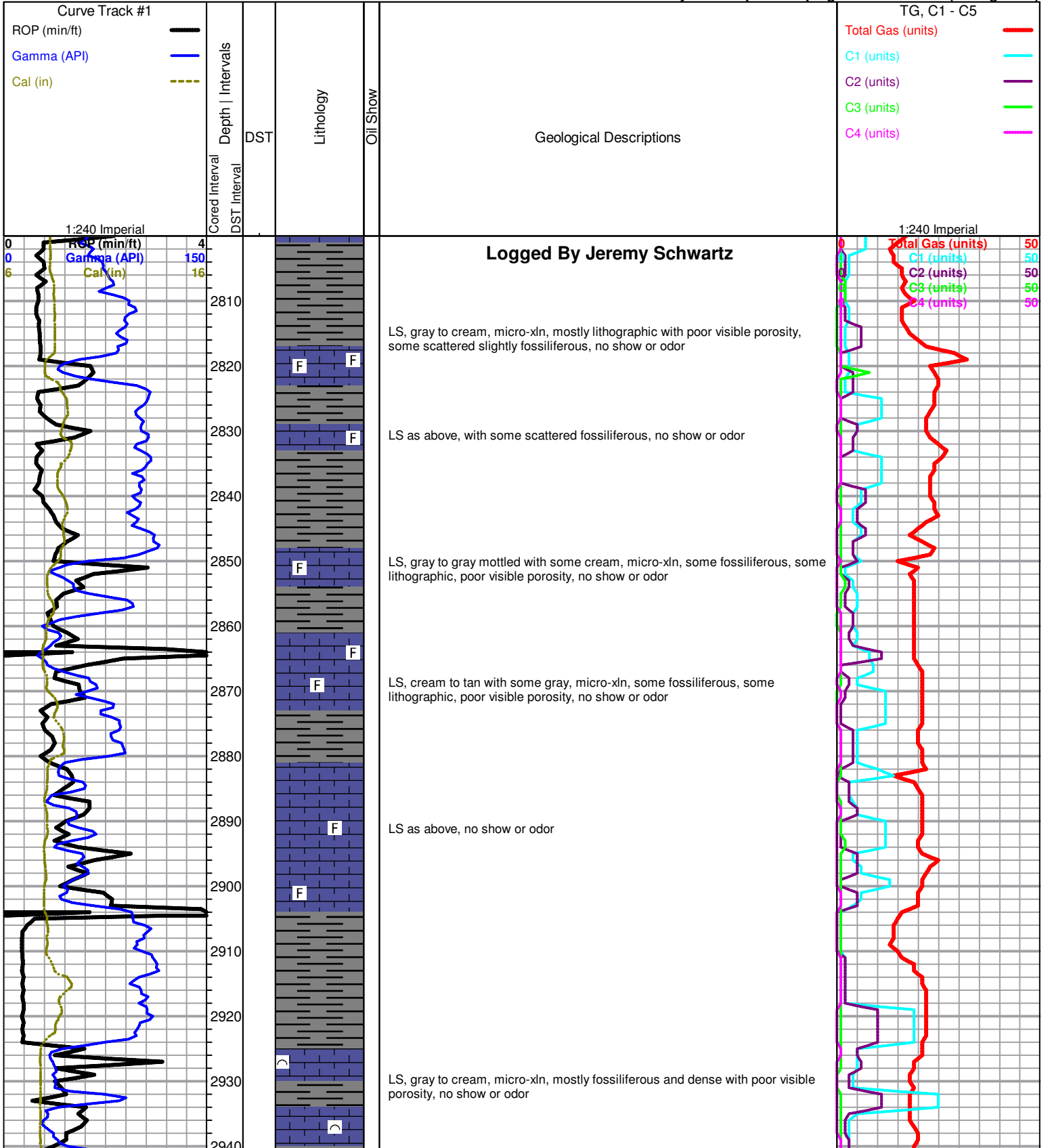
ACCESSORIES

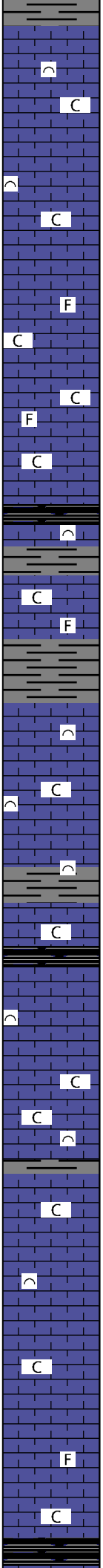
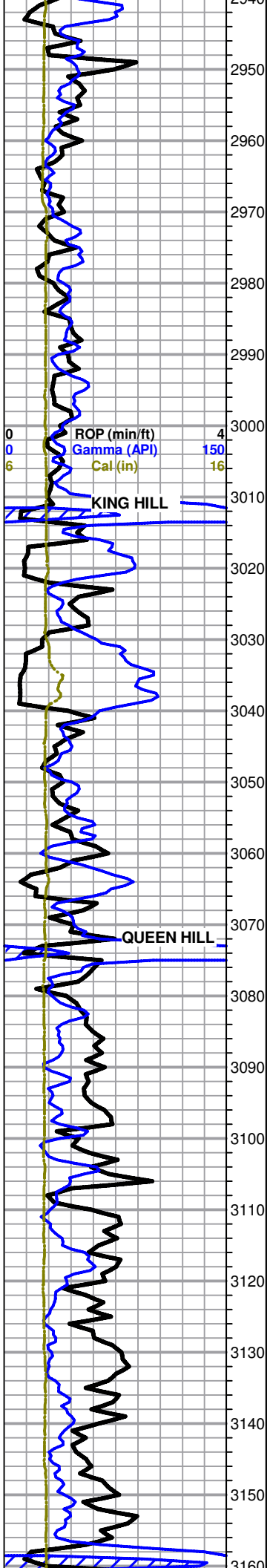
MINERAL
 P Pyrite
FOSSIL
 ^ Bioclastic or Fragmental
 F Fossils < 20%
STRINGER
 ~ Chert
 Limestone
 Sandstone
 Shale
 red shale
TEXTURE
 C Chalky

OTHER SYMBOLS

MISC
 Daily Report
DST
 DST Int
 DST alt

-  Digital Photo
-  Document
-  Folder
-  Link
-  Vertical Log File
-  Horizontal Log File
-  Core Log File
-  Drill Cuttings Rpt





Topeka 2944 (-966)

LS, cream with some scattered gray, micro-xln, mostly fossiliferous and dense with poor visible porosity, with some scattered soft and chalky in part, slightly chalky, no show or odor

LS as above, no show or odor

LS, mostly cream to tan with some scattered gray, micro-xln, some lithographic, some slightly fossiliferous, poor visible porosity, with some soft and chalky in part, fairly chalky, no show or odor

LS, cream, micro-xln, some lithographic, some fossiliferous, poor visible porosity, with some scattered soft and chalky in part, no show or odor

LS, cream, micro-xln, fossiliferous with some with some scattered lithographic, poor visible porosity, with some scattered soft and chalky in part, no show or odor

LS as above, no show or odor

LS, cream, micro-xln, lithographic to fossiliferous, with some soft and chalky in part, poor visible porosity, fairly chalky, no show or odor

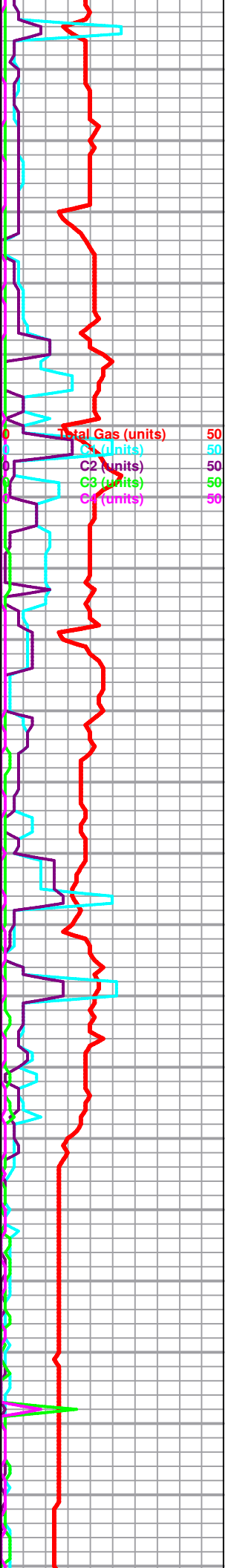
LS as above, slightly less chalky, no show or odor

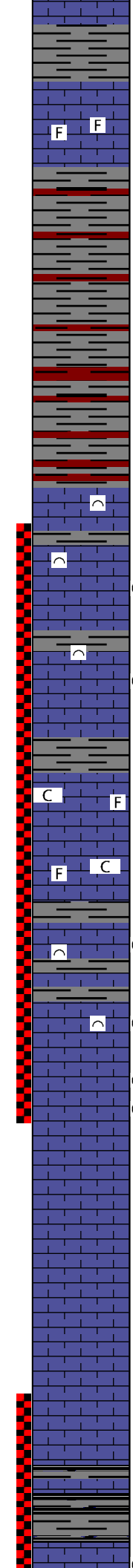
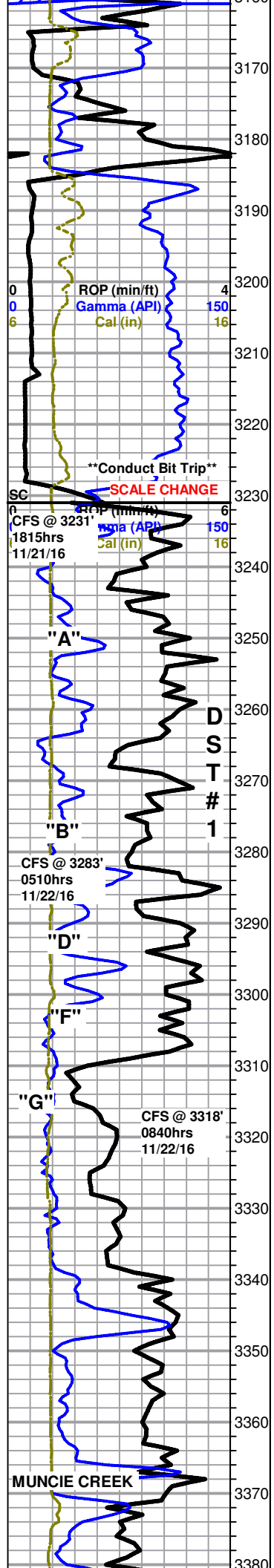
LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, with some scattered slightly fossiliferous, some soft and chalky in part, no show or odor

LS as above, no show or odor

Heebner Shale 3157 (-1209)

Shale, black carbonaceous





Toronto 3172 (-1224)

LS, cream, micro-xln, mostly lithographic with some scattered fossiliferous, dense with poor visible porosity, no show or odor

Douglas Shale 3184 (-1236)

Shale, gray with some scattered red, mostly soft and waxy

Shale as above, with slight influx red

Brown Lime 3229 (-1281)

LS, brown, micro-xln, fossiliferous and very dense with no visible porosity, no show or odor

Lansing Kansas-City 3237 (-1289)

Shelby Schneider Unit 1-18 dst 1.jpg

LS, cream with some scattered gray, micro-xln, lithographic to fossiliferous and dense with poor visible porosity, found few very scattered chips cream, oolitic, with very scattered, very poor inter-oolite stain in few chips with some very scattered small re-crystallized edge vugs, upon break chips show mostly poor inter-xln porosity, NSFO, very poor fleeting odor in wet cup

~3250' LS, cream to gray, micro-xln, lithographic to fossiliferous, mostly dense with poor visible porosity, found 2 chips with slightly re-crystallized edges and one to two very small edge vugs with poor black stain in porosity only, upon break S-FSFO and mostly poor visible inter-xln porosity, VSSFO in tray, very poor fleeting odor

3283' 30" LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, some very scattered slightly fossiliferous, with some scattered soft and chalky in part, slightly chalky, no show or odor

3283' 60" Mostly same as above, no show or odor

LS, cream, micro-xln, mostly lithographic and barren with poor visible porosity, with some very scattered fossiliferous, dark gray to brown, with some scattered inter-fossil stain, few small chips mostly saturated with fair pinpoint edge porosity, upon break SSFO and fair visible inter-xln porosity, NSFO in tray, fair odor

LS as above, few chips with very slightly vuggy edges and stain in porosity only, NSFO in tray, poor odor

3318' 30" LS, cream, micro-xln, lithographic with poor visible porosity, with some soft and chalky in part, also with some very scattered small chips oomoldic with poor visible porosity and brown to black stain mostly confined to oomolds but also partly in matrix in few, fairly chalky, NSFO, fair odor

3318' 60" Mostly same as above, with slight influx very small chips oomoldic with scattered to mostly saturated light golden brown stain in and around oomolds and in matrix in some, SSFO upon break in few, NSFO in tray, fairly chalky, good odor

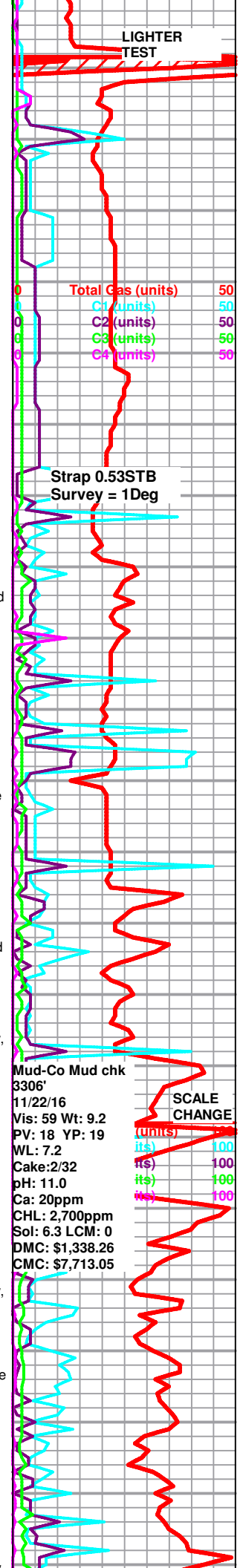
~3330' LS, cream to white, micro-xln, lithographic, abundant soft and chalky in part, poor overall visible porosity, very chalky, no show or odor

LS, cream to white, micro-xln, lithographic and dense with poor visible porosity, with some soft and chalky in part, trace oolitic, recrystallized with some scattered poor pinpoint edge porosity, fairly chalky, no show or odor

LS, cream to light gray with influx brown, micro-xln, mostly lithographic and dense with poor visible porosity, some scattered slightly fossiliferous, with trace oomoldic with poor oomold porosity, less chalky, no show or odor

LS as above, no show or odor

LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, with some scattered (~20%) with poor to fair pinpoint porosity to slightly vuggy edges, chips appear mostly barren with some scattered to very scattered light golden brown stain around porosity, upon break most chips with stain have SSFO and some show fair inter-xln porosity with scattered stain in matrix, slow

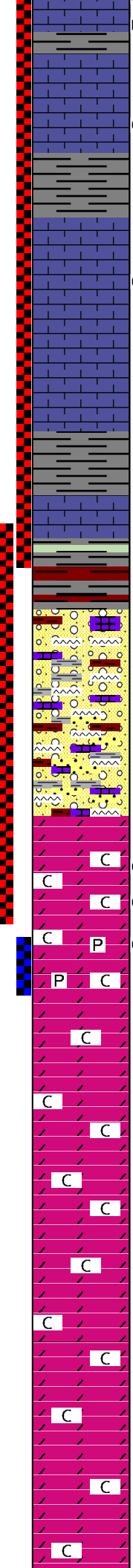
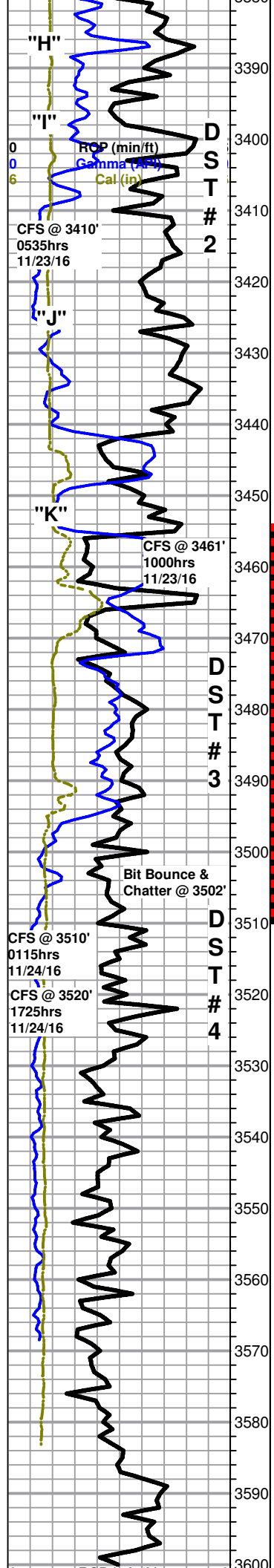


Total Gas (units) 50
 C1 (units) 50
 C2 (units) 50
 C3 (units) 50
 C4 (units) 50

Strap 0.53STB Survey = 1Deg

Mud-Co Mud chk 3306' 11/22/16
 Vis: 59 Wt: 9.2
 PV: 18 YP: 19
 WL: 7.2
 Cake: 2/32
 pH: 11.0
 Ca: 20ppm
 CHL: 2,700ppm
 Sol: 6.3 LCM: 0
 DMC: \$1,338.26
 CMC: \$7,713.05

SCALE CHANGE (units)
 100
 100
 100
 100



3390' 30" SSFO and some show fair inter-xln porosity with scattered stain in matrix, slow streaming cut with bright white fluor., trace oomoldic with large oomolds, recrystallized with scattered light golden brown stain in and around oomolds, NSFO in tray, scattered dull yellow fluor., fair odor

3410' 30" LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, with some very scattered chips with re-crystallized edges and mostly poor to fair pinpoint to very slightly vuggy edge porosity with very scattered stain around porosity only, upon break SSFO, NSFO in tray, no fluor., poor odor

3410' 60" LS as above, NSFO, no fluor., no odor

3420' LS, cream, micro-xln, mostly lithographic and dense with poor visible porosity, with some very scattered oolitic with some scattered fair inter-oolite porosity and mostly poor stain in and around porosity only, SSFO upon break, SSFO in tray, no fluor., fair odor

3430' LS, cream, micro-xln, lithographic and dense with poor visible porosity, no show, fluor., or odor

3461' 30" LS, cream with some very scattered pale yellow, micro-xln, lithographic and dense with poor visible porosity, no show, fluor., or odor

BKC 3456 (-1508)

3461' 60" Mostly same as above, with slight influx gray shale with trace green, no show or odor

Shale, gray and red, also with some scattered cream to gray LS with mixed varicolored tan to opaque and red to orange cherts, heavy red wash, no show or odor

Conglomerate as above, also with abundant vf-f sub-rounded to rounded quartz SS grains in bottom of tray, heavy red wash, no show or odor

Conglomerate as above, red wash, no show or odor

Arbuckle 3495 (-1547)

3510' sample, Conglomerate as above, with trace dolomite, white, micro-med-xln, sub-sucrosic to sub-rhombic and dense with poor visible porosity, most appear barren, few chips with very scattered stain, upon break chips have fair show free oil and some show some scattered fair inter-xln porosity and stain, red wash, NSFO in tray, fair odor

3510' 30" Dolomite, white, micro-xln with some very scattered med-xln, mostly sub-sucrosic to sub-rhombic and dense with poor visible porosity, some fairly friable, most appear barren, some with very scattered brown stain, upon break some chips have slight to fair show free oil and show some fair inter-xln porosity and stain, few chips with good show free oil, SSFO in tray, chalky, good odor

3510' 60" Dolomite, mostly same as above, with slight influx med-xln, mostly sub-rhombic with some scattered fair rhombic development, with very scattered poor stain, upon break chips have good show free oil and show some scattered fair inter-xln porosity, slightly chalky, good odor

Shelby Schneider Unit 1-18 dst3.jpg

3520' 30" Dolomite, white, micro-xln with some very scattered med-xln, mostly sub-sucrosic and dense with poor visible porosity, with some very scattered fair visible porosity in few chips, mostly barren, upon break SSFO in some chips, NSFO in tray, fairly chalky, trace pyrite and dolomite with pyrite inclusions, fair odor

3520' 60" Dolomite, white, micro-med xln, mostly sub-rhombic with poor visible porosity, some scattered fair visible porosity, mostly barren, upon break VSSFO in few chips, NSFO in tray, fairly chalky, trace pyrite, fair odor

Shelby Schneider Unit 1-18 dst3.jpg

~3530" Dolomite, white, mostly micro-xln with some very scattered med-xln, sub-sucrosic to sub-rhombic and mostly dense with poor visible porosity, some very scattered fairly friable sub-rhombic with some very scattered inter-xln porosity, barren, fairly chalky, no show or odor

~3540" Dolomite as above, no show or odor

~3550" Dolomite as above, with slight influx med-xln sub-rhombic and fairly friable with some very scattered poor to fair inter-xln porosity, barren, fairly chalky, no odor

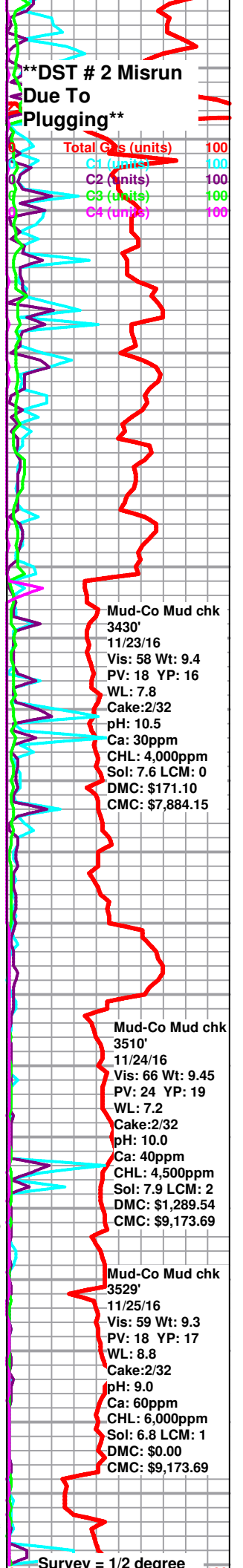
~3560" Dolomite, micro-med xln, sub-sucrosic to sub-rhombic and mostly dense with poor visible porosity, with some scattered med-xln sub-rhombic with some scattered poor to fair inter-xln porosity, barren, fairly chalky, no odor

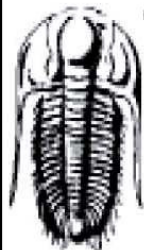
~3570" Dolomite as above, no show or odor

Dolomite, cream to white, micro-xln, mostly sub-sucrosic and dense with poor visible porosity, slightly chalky, no show or odor

Dolomite as above, no show or odor

Dolomite, cream with some very scattered white, micro-xln, mostly sub-sucrosic to sucrosic and dense with poor visible porosity, some scattered fairly friable, with some very scattered sub-rhombic, slightly chalky, no show or odor





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Shelby Resources LLC

18-18s-14w

621 17th STE 1155
Denver Co, 80293+1101

Schneider Unit #1-18

Job Ticket: 61861

DST#: 1

ATTN: Jeremy Schwartz/ Chr

Test Start: 2016.11.22 @ 12:29:30

GENERAL INFORMATION:

Formation: **LKC 'A-G'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:13:15

Time Test Ended: 19:36:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J. Staab

Unit No: 84

Interval: **3234.00 ft (KB) To 3318.00 ft (KB) (TVD)**

Reference Elevations: 1948.00 ft (KB)

Total Depth: 3318.00 ft (KB) (TVD)

1937.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 9120

Outside

Press@RunDepth: 40.07 psig @ 3235.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.11.22

End Date: 2016.11.22

Last Calib.: 2016.11.22

Start Time: 12:29:30

End Time: 19:36:30

Time On Btm: 2016.11.22 @ 14:11:30

Time Off Btm: 2016.11.22 @ 17:53:15

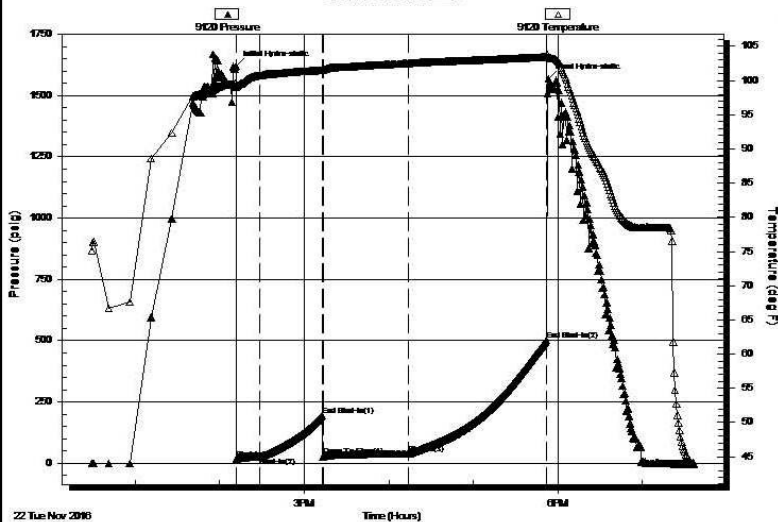
TEST COMMENT: 15-IF-Very Weak Surface Blow ; Built to 1 inch

45-IS-No Blow Back

60-FF-Fair Blow ; Built to 6 inches

90-FSI-No Blow Back

Pressure vs. Time



PRESSURE SUMMARY

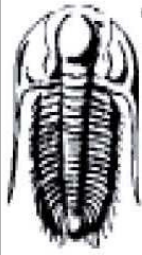
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1620.95	99.58	Initial Hydro-static
1	18.46	99.06	Shut-In(1)
17	27.57	100.72	Shut-In(2)
62	194.20	101.51	End Shut-In(1)
62	27.73	101.51	Open To Flow (1)
123	40.07	102.53	Shut-In(3)
221	501.12	103.45	End Shut-In(2)
222	1569.73	103.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
61.00	OCM 15% O 85% M	0.30

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Shelby Resources LLC

18-18s-14w

621 17th STE 1155
Denver Co, 80293+1101

Schneider Unit #1-18

Job Ticket: 61863

DST#: 3

ATTN: Jeremy Schwartz/ Chr

Test Start: 2016.11.24 @ 04:02:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:46:15

Time Test Ended: 12:35:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: **3454.00 ft (KB) To 3510.00 ft (KB) (TVD)**

Reference Elevations: 1948.00 ft (KB)

Total Depth: 3318.00 ft (KB) (TVD)

1937.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8368

Inside

Press@RunDepth: 1037.57 psig @ 3455.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.11.24 End Date: 2016.11.24

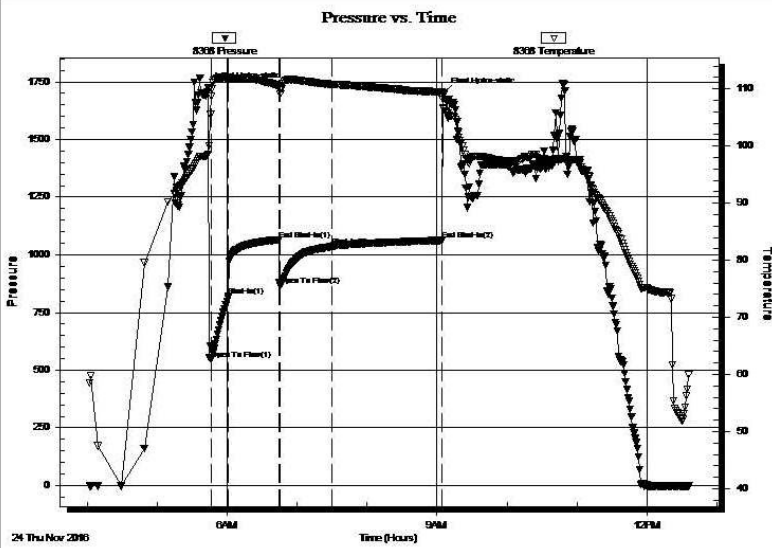
Last Calib.: 2016.11.24

Start Time: 04:02:15 End Time: 12:35:45

Time On Btm: 2016.11.24 @ 05:44:00

Time Off Btm: 2016.11.24 @ 09:05:30

TEST COMMENT: 15-IF-BOB in 20 seconds; gas to surface
45-ISI-BOB in 10 minutes
45-FF-BOB instantaneously; gas to surface
90-FSI-Fair Blow ; Built to 4 inches



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1726.47	98.59	Initial Hydro-static
3	546.16	108.67	Open To Flow (1)
18	819.33	111.81	Shut-In(1)
61	1065.14	110.54	End Shut-In(1)
62	865.22	109.77	Open To Flow (2)
106	1037.57	110.76	Shut-In(2)
200	1062.24	109.44	End Shut-In(2)
202	1699.67	106.73	Final Hydro-static

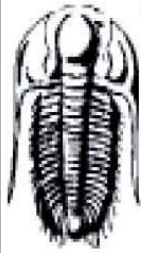
Recovery

Length (ft)	Description	Volume (bbl)
2881.00	CGO 10%G 90% O	38.44

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Shelby Resources LLC

18-18s-14w

621 17th STE 1155
Denver Co, 80293+1101

Schneider Unit #1-18

Job Ticket: 61863

DST#: 3

ATTN: Jeremy Schwartz/ Chr

Test Start: 2016.11.24 @ 04:02:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:46:15

Time Test Ended: 12:35:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: **3454.00 ft (KB) To 3510.00 ft (KB) (TVD)**

Reference Elevations: 1948.00 ft (KB)

Total Depth: 3318.00 ft (KB) (TVD)

1937.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8368

Inside

Press@RunDepth: 1037.57 psig @ 3455.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.11.24

End Date: 2016.11.24

Last Calib.: 2016.11.24

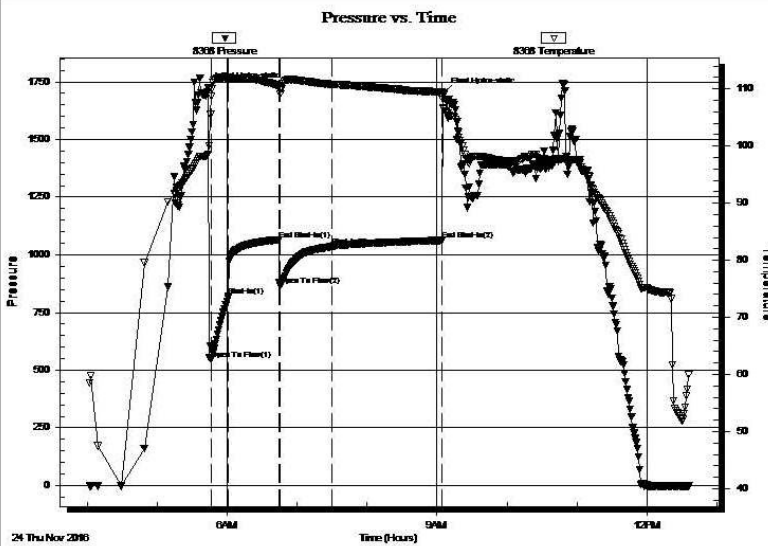
Start Time: 04:02:15

End Time: 12:35:45

Time On Btm: 2016.11.24 @ 05:44:00

Time Off Btm: 2016.11.24 @ 09:05:30

TEST COMMENT: 15-IF-BOB in 20 seconds; gas to surface
45-ISI-BOB in 10 minutes
45-FF-BOB instantaneously; gas to surface
90-FSI-Fair Blow ; Built to 4 inches



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1726.47	98.59	Initial Hydro-static
3	546.16	108.67	Open To Flow (1)
18	819.33	111.81	Shut-In(1)
61	1065.14	110.54	End Shut-In(1)
62	865.22	109.77	Open To Flow (2)
106	1037.57	110.76	Shut-In(2)
200	1062.24	109.44	End Shut-In(2)
202	1699.67	106.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2881.00	CGO 10%G 90% O	38.44

Gas Rates

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

* Recovery from multiple tests