

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ 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: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

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

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input 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

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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
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 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>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

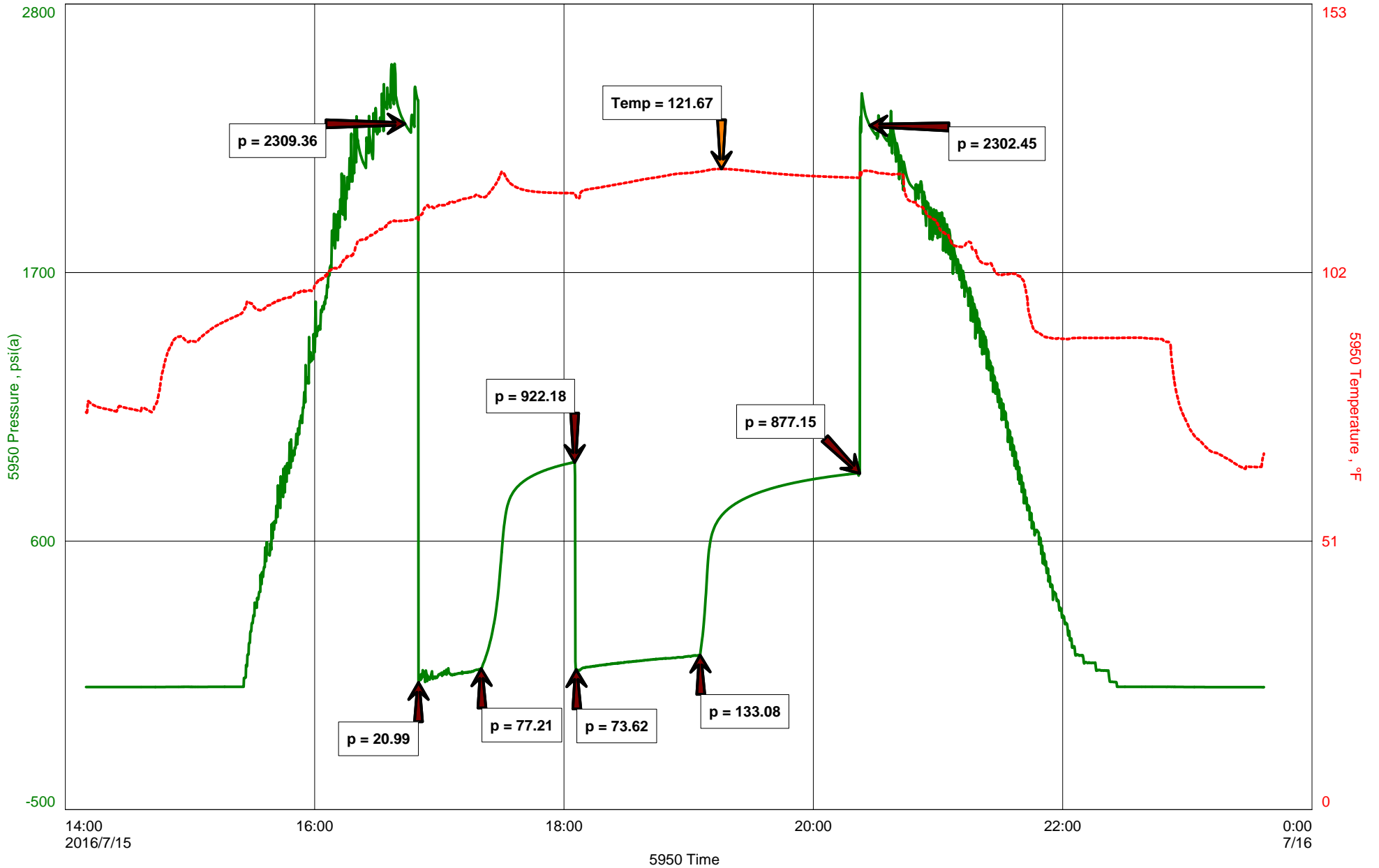
TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	H & D Exploration LLC
Well Name	DURLER 1
Doc ID	1317246

Tops

Name	Top	Datum
Anydrite	1544	+ 886
Base Anhydrite	1580	+ 850
Heebner	4025	- 1595
Toronto	4041	- 1611
Lansing	4123	- 1693
Base KC	4502	- 2072
Marmcon	4517	- 2087
Pawnee	4589	- 2159
Fort Scott	4652	- 2222
Cherokee Shale	4678	- 2248
Mississippi	4741	- 2311
Miss. Spergen	4766	- 2336
Miss. Warsaw	4796	- 2366
Miss. Osage	4878	-2448
Gilmore City	5016	- 2586
RTD	5055	- 2625
LTD	5052	-2622

Durler #1





Hoisington, Kansas

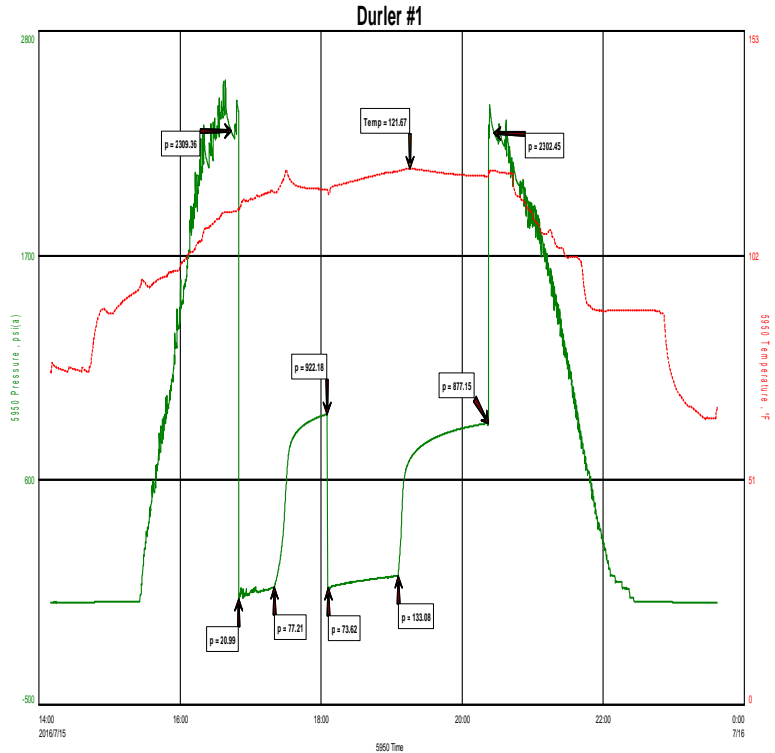
Michael Carroll
620-617-0368
carroll.dtlc@gmail.com

General Information

Company Name H&D Exploration LLC

Contact	Mitch Driscoll
Well Name	Durler #1
Unique Well ID	Dst #1 Cherokee LS 4677-4731'
Surface Location	Sec 32-24s-22w
Field	F.A.R. SouthEast
Well Type	Vertical
Test Type	Drill Stem Test
Well Operator	H&D Exploration LLC

Formation	Dst #1 Cherokee LS 4677-4731'
Well Fluid Type	01 Oil
Test Purpose	Initial Test
Start Test Date	2016/07/15
Start Test Time	14:10:00
Final Test Time	23:35:00
Job Number	P0112
Report Date	2016/07/15
Prepared By	Michael Carroll



TEST RECOVERY

Remarks	Recovery:	2475'	Gas In Pipe			
		86'	OCWCM 15%O	12%W	73%M	
		189'	WCMCO 80%O	10%W	10%M	

Total Fluid: 275'

Tool Sample: 100%O

Chlorides 9500PPM
RW .9 @ 60 Degrees
PH 7



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: DURLER#1DST#1

TIME ON: 1410
TIME OFF: 2335

Company H&D EXPLORATION LLC Lease & Well No. DURLER #1
Contractor SOUTHWIND DRLG RIG 8 Charge to H&D EXPLORATION LLC
Elevation 2420 Formation CHEROKEE LS Effective Pay _____ Ft. Ticket No. P0112
Date 7-15-16 Sec. 32 Twp. 24 S Range 22 W County HODGEMAN State KANSAS
Test Approved By JIM MUSGROVE Diamond Representative Michael Carroll

Formation Test No. 1 Interval Tested from 4677 ft. to 4731 ft. Total Depth 4731 ft.
Packer Depth 4672 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 4677 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____
Top Recorder Depth (Inside) 4662 ft. Recorder Number 5950 Cap. 5000 P.S.I.
Bottom Recorder Depth (Outside) 4714 ft. Recorder Number 0230 Cap. 5000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 46 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.4 Water Loss 10.4 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
Chlorides 7000 P.P.M. Drill Pipe Length 4644 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number 11 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NO Reversed Out NO Anchor Length 54(22.5A) ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: 1/4" BLOW-BUILT TO BOB IN 5 MINUTES 15 SECONDS NOBB
2nd Open: 4" BLOW-BUILT TO BOB IN 1 MINUTE 40 SECONDS 1 1/2" BB

Recovered 2475 ft. of GAS IN PIPE CHLORIDES 9500 PPM
Recovered 86 ft. of OCWCM 15%O 12%W 73%M RW .9 @ 60 DEGREES
Recovered 189 ft. of WCMCO 80%O 10%W 10%M PH 7
Recovered 275 ft. of TOTAL FLUID

Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
TOOL SAMPLE: <u>100%O</u>	Total

Time Set Packer(s) 4:45 P.M. A.M. P.M. Time Started Off Bottom 8:15 P.M. A.M. P.M. Maximum Temperature 122

Initial Hydrostatic Pressure..... (A) 2309 P.S.I.
Initial Flow Period..... Minutes 30 (B) 21 P.S.I. to (C) 77 P.S.I.
Initial Closed In Period..... Minutes 45 (D) 922 P.S.I.
Final Flow Period..... Minutes 60 (E) 74 P.S.I. to (F) 133 P.S.I.
Final Closed In Period..... Minutes 75 (G) 877 P.S.I.
Final Hydrostatic Pressure..... (H) 2302 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



Hoisington, Kansas

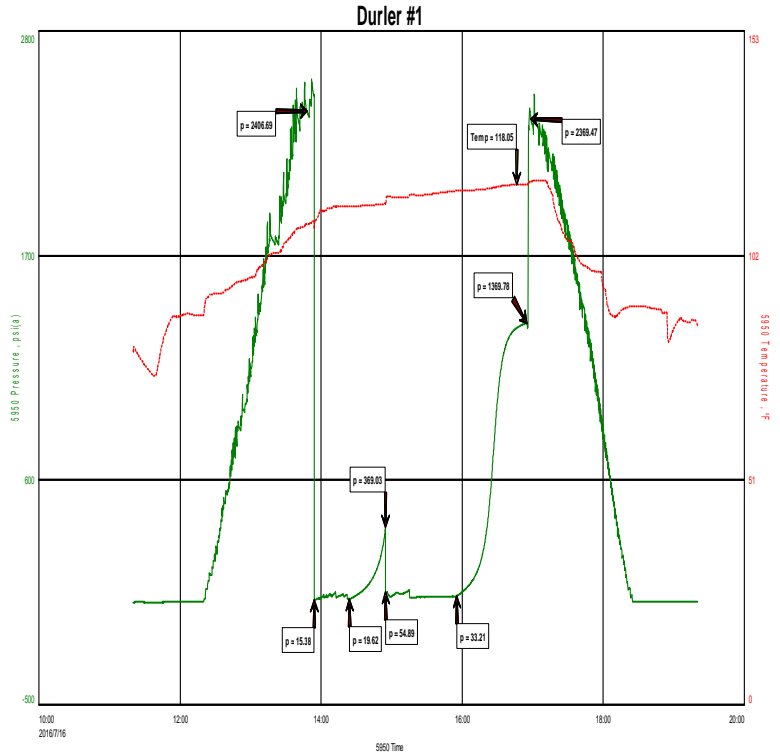
Michael Carroll
620-617-0368
carroll.dtlc@gmail.com

General Information

Company Name H&D Exploration LLC

Contact	Mitch Driscoll
Well Name	Durler #1
Unique Well ID	Dst #2 Miss 4764-4780'
Surface Location	Sec 32-24s-22w Hodgeman County
Field	F.A.R. SouthEast
Well Type	Vertical
Test Type	Drill Stem Test
Well Operator	H&D Exploration LLC

Formation	Dst #2 Miss 4764-4780'
Well Fluid Type	01 Oil
Test Purpose	Initial Test
Start Test Date	2016/07/16
Start Test Time	11:20:00
Final Test Time	19:20:00
Job Number	P0113
Report Date	2016/07/16
Prepared By	Michael Carroll



TEST RECOVERY

Remarks	Recovery:	210'	Gas In Pipe				
		45'	GCWCOM	3%G	34%O	15%W	48%M

Total Fluid: 45'

Chlorides 8500PPM
RW 1 @ 65 Degrees
PH 7



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: DURLER#1DST#2

TIME ON: 1120
TIME OFF: 1920

Company H&D EXPLORATION LLC Lease & Well No. DURLER #1
Contractor SOUTHWIND DRLG RIG 8 Charge to H&D EXPLORATION LLC
Elevation 2420 Formation MISS Effective Pay _____ Ft. Ticket No. P0113
Date 7-16-16 Sec. 32 Twp. 24 S Range 22 W County HODGEMAN State KANSAS
Test Approved By JIM MUSGROVE Diamond Representative Michael Carroll

Formation Test No. 2 Interval Tested from 4764 ft. to 4780 ft. Total Depth 4780 ft.
Packer Depth 4759 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 4764 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4749 ft. Recorder Number 5950 Cap. 5000 P.S.I.
Bottom Recorder Depth (Outside) 4765 ft. Recorder Number 0230 Cap. 5000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 50 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.4 Water Loss 12 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
Chlorides 8000 P.P.M. Drill Pipe Length 4731 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number 11 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NO Reversed Out NO Anchor Length 16 ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WSB-BUILT TO 1 1/2" IN 30 MINUTES NOBB
2nd Open: 1"BLOW-BUILT TO 8" IN 60 MINUTES NOBB

Recovered 210 ft. of GAS IN PIPE CHLORIDES 8500 PPM
Recovered 45 ft. of GCWCOM 3%G 34%O 15%W 48%M RW 1 @ 65 DEGREES
Recovered 45 ft. of TOTAL FLUID PH 7

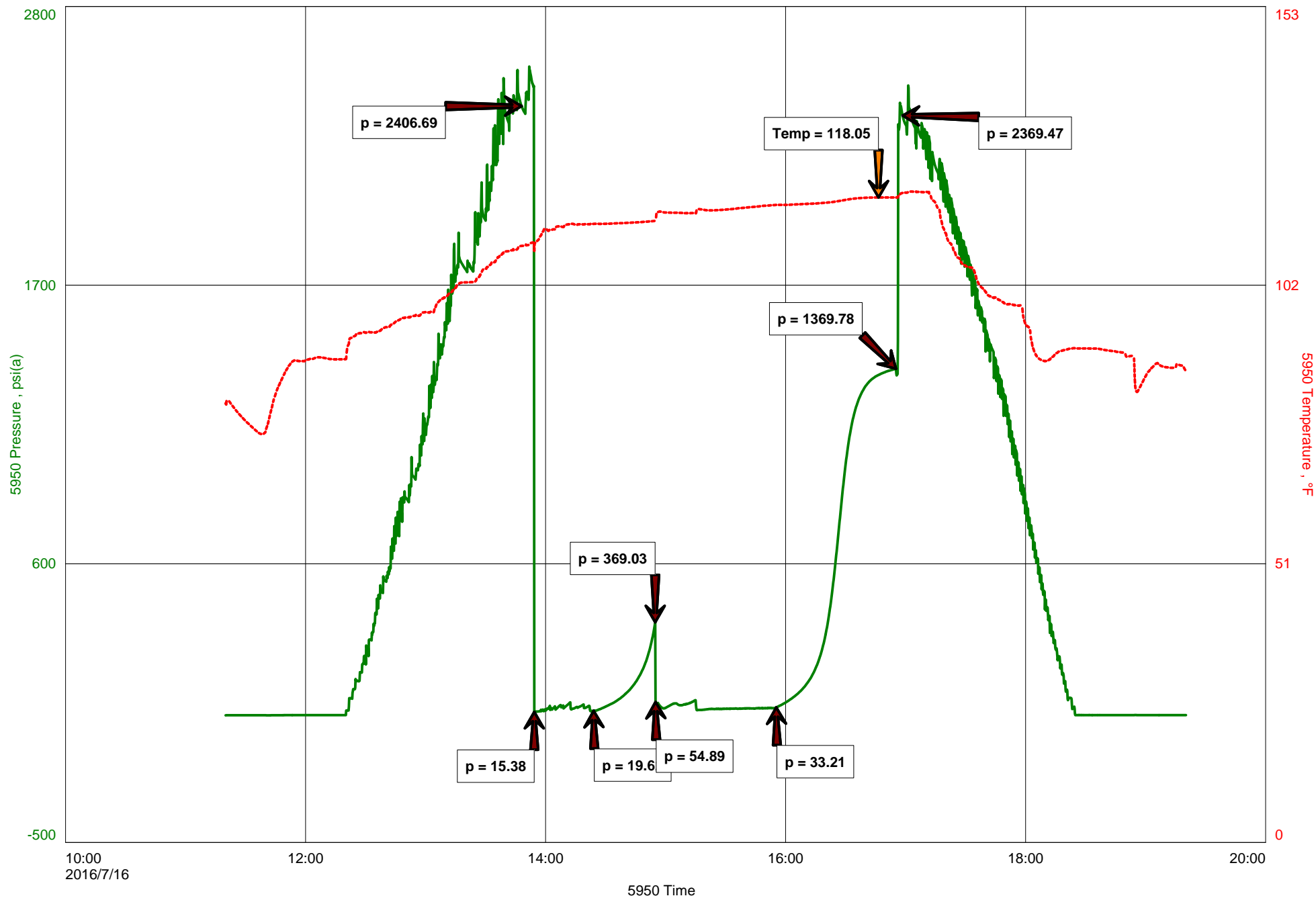
Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Recovered _____ ft. of _____	Insurance
Remarks: _____	
TOOL SAMPLE: <u>70%O 15%W 15%M</u>	Total

Time Set Packer(s) 1:55 P.M. A.M. P.M. Time Started Off Bottom 4:55 P.M. A.M. P.M. Maximum Temperature 118

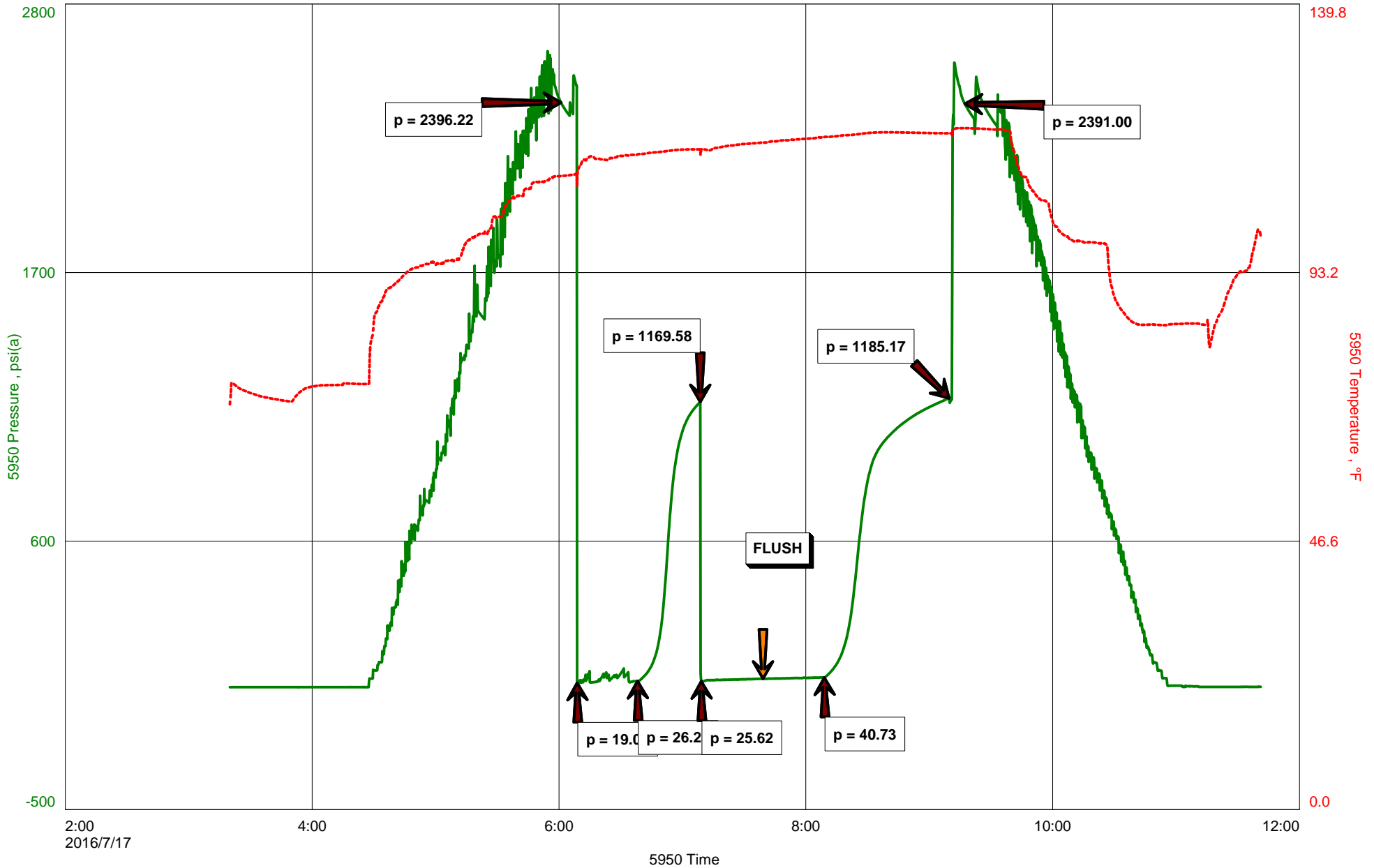
Initial Hydrostatic Pressure..... (A) 2407 P.S.I.
Initial Flow Period..... Minutes 30 (B) 15 P.S.I. to (C) 20 P.S.I.
Initial Closed In Period..... Minutes 30 (D) 369 P.S.I.
Final Flow Period..... Minutes 60 (E) 55 P.S.I. to (F) 33 P.S.I.
Final Closed In Period..... Minutes 60 (G) 1370 P.S.I.
Final Hydrostatic Pressure..... (H) 2369 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

Durler #1



Durler #1



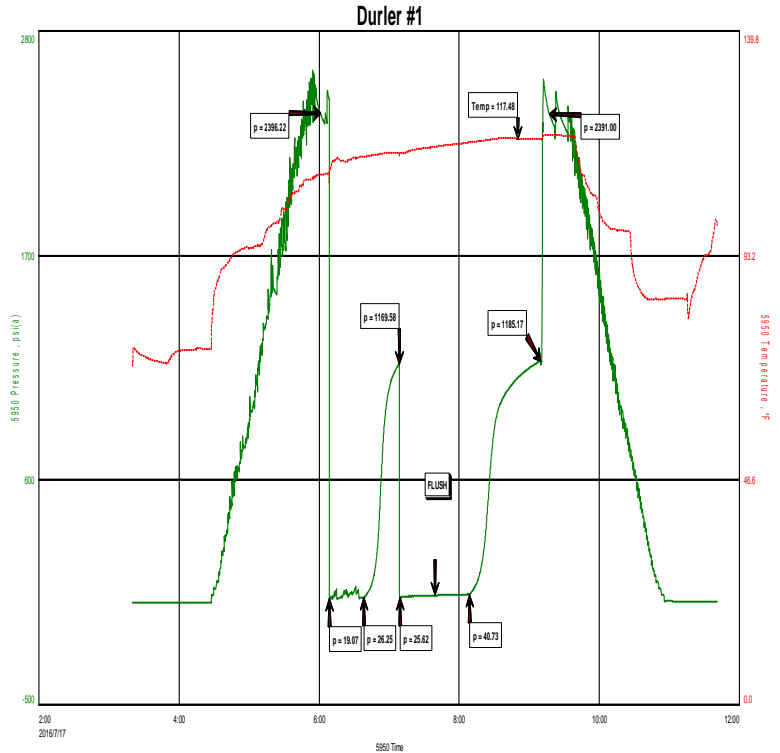


Hoisington, Kansas

Michael Carroll
620-617-0368
carroll.dtlc@gmail.com

General Information

Company Name	H&D Exploration LLC
Contact	Mitch Driscoll
Well Name	Durler #1
Unique Well ID	Dst #3 MISS 4767-4791'
Surface Location	Sec 32-24s-22w Hodgeman County
Field	F.A.R. SouthEast
Well Type	Vertical
Test Type	Drill Stem Test
Well Operator	H&D Exploration LLC
Formation	Dst #3 MISS 4767-4791'
Well Fluid Type	01 Oil
Test Purpose	Initial Test
Start Test Date	2016/07/17
Start Test Time	03:20:00
Final Test Time	11:42:00
Job Number	P0114
Report Date	2016/07/17
Prepared By	Michael Carroll



TEST RECOVERY

Remarks	Recovery:	94'	Gas In Pipe				
		63'	GCWCOM	8%G	35%O	12%W	45%M
	Total Fluid:	63'					
	Tool Sample:	87%O	10%W	3%M			
	Chlorides	8500 PPM					
	RW .8 @ 85 Degrees						
	PH 7						



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: DURLER#1DST#3

TIME ON: 0320
TIME OFF: 1142

Company H&D EXPLORATION LLC Lease & Well No. DURLER #1
Contractor SOUTHWIND DRLG RIG 8 Charge to H&D EXPLORATION LLC
Elevation 2420 Formation MISS Effective Pay _____ Ft. Ticket No. P0114
Date 7-17-16 Sec. 32 Twp. 24 S Range 22 W County HODGEMAN State KANSAS
Test Approved By JIM MUSGROVE Diamond Representative Michael Carroll

Formation Test No. 3 Interval Tested from 4767 ft. to 4791 ft. Total Depth 4791 ft.
Packer Depth 4762 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 4767 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4752 ft. Recorder Number 5950 Cap. 5000 P.S.I.
Bottom Recorder Depth (Outside) 4768 ft. Recorder Number 0230 Cap. 5000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 59 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.5 Water Loss 12 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
Chlorides 7000 P.P.M. Drill Pipe Length 4734 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number 11 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NO Reversed Out NO Anchor Length 24 ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WSB-BUILT TO 1/2" IN 30 MINUTES **NOBB**
2nd Open: 1"BLOW-DIMINISHED TO 1/4" IN 30 MINUTES(FLUSHED TOOL)GOOD SURGE, STEADY 1/4" BLOW **NOBB**

Recovered 94 ft. of GAS IN PIPE CHLORIDES 8500 PPM
Recovered 63 ft. of GCWCOM 8%G 35%O 12%W 45%M RW .8 @ 85 DEGREES
Recovered 63 ft. of TOTAL FLUID PH 7

Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Recovered _____ ft. of _____	Insurance
Remarks: _____	
TOOL SAMPLE: <u>87%O 10%W 3%M</u>	Total

Time Set Packer(s) 6:07 A.M. ^{A.M.}/_{P.M.} Time Started Off Bottom 9:07 A.M. ^{A.M.}/_{P.M.} Maximum Temperature 117

Initial Hydrostatic Pressure..... (A) 2396 P.S.I.
Initial Flow Period..... Minutes 30 (B) 19 P.S.I. to (C) 26 P.S.I.
Initial Closed In Period..... Minutes 30 (D) 1170 P.S.I.
Final Flow Period..... Minutes 60 (E) 26 P.S.I. to (F) 41 P.S.I.
Final Closed In Period..... Minutes 60 (G) 1185 P.S.I.
Final Hydrostatic Pressure..... (H) 2391 P.S.I.

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MORNING DRILLING REPORT

For: H&D Exploration, LLC

SOUTHWIND DRILLING, INC.

RIG No. 8

Well Name: Durler #1
 Location: 1127' FNL & 1120' FWL
 Section: 32-24S-22W
 County: Hodgeman
 API: 15-083-21924-00-00

GL Elevation: 2420'
 KB: 2430'
 Est. TD: 4600'
 Conductor Pipe: N/A

Rig No. 8 (Pusher Bill Sanders) 620 617-0706
 Rig No. 8 (Doghouse) 620 566-7156
 Southwind Drilling Office 620 564-3800



Surface Casing: Ran 37 joints of 23#, 8 5/8" casing, Tally @ 1534', Set @ 1545', used 600 sacks of 60/40 Poz, 3% cc, 2% gel, 1/2# Flo-seal, cement circulated, by Quality (Ticket #1738), plug down 11:00 am on 07.09.16.

Plugging Info: Plugged well with 170 sacks of 60/40 Poz, 4% gel, 2% cc, 1/4# Flo-seal, 1st plug @ 1575' w/ 50 sacks, 2nd plug @ 800' w/ 50 sacks, 3rd plug @ 60' w/ 20 sacks, 30 sacks for Rat hole, 20 sacks for Mouse hole, cemented, by Global (Ticket # _____), job complete @ 4:00 am on 07.19.16.

Rotary Total Depth: 5055'
 Log Total Depth: 5052'

Geologist: Jim Musgrove

7:00 A.M. Depth: 5055' 7:00 A.M. Current Operation: TEAR DOWN

Spud Date & Time:	07/07/16	07/08/16	07/09/16	07/10/16	07/11/16	07/12/16	07/13/16	07/14/16	07/15/16	07/16/16	07/17/16	07/18/16	07/19/16	Total
07/08/2016 @ 12:30 AM	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	
Total Depth (7:00am)	0	580	1546	1950	2902	3459	4030	4455	4731	4775	4791	5043	5055	5055
Daily Progress	580	966	404	952	557	571	425	276	44	16	252	12		5055
Ft. Per Hr.	145.00	71.56	70.26	53.63	30.94	30.05	23.94	16.00	17.60	21.33	20.16	12.00	#DIV/0!	38.96
Current Operation (7:00am)	Rig Up	Drilling	TOWB	Drilling	Drilling	CTCH	Drilling	Drilling	Short Trip	CFS	DST #3	Drilling	Tear Down	
Formation	Surface	Surface	Redbed	Redbed / Shale	Shale / Lime	Shale	Shale / Lime	Shale / Lime	Lime	Cherokee Lime	Mississippi	Mississippi	Lime	
Fuel Used (32.4 Gal/Inch)	162.00	307.80	243.00	453.60	486.00	453.60	388.80	421.20	243.00	145.80	453.60	259.20		4017.60
Survey (degree & depth)		1° @ 1546'							3/4° @ 4731'			3/4° @ 5055'		

Mud Cost	\$0.00	\$658.00	\$224.00	\$0.00	\$2,870.18	\$854.82	\$1,194.00	\$0.00	\$0.00	\$0.00	\$835.16	\$297.86		\$6,934.02
Weight (# / Gal)		9.5	8.7	9.0	8.5	9.1	9.4	9.4	9.3	9.2	9.5			
Vis (Funnel)		50	28	28	40	40	46	45	55	51	53			
Water Loss (cc)						9.1	10.4	10.4	12.0	12.0	11.2			

Bit #1														
Bit Make / Type	JZ	JZ												
Bit Size	12 1/4	12 1/4												
Bit Hours	4.00	13.50												17.50
Bit #2														
Bit Make / Type			Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	
Bit Size			7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	
Bit Hours			5.75	17.75	18.00	19.00	17.75	17.25	2.50	0.75	12.50	1.00		112.25
Bit Cumulative Hours	4.00	13.50	5.75	17.75	18.00	19.00	17.75	17.25	2.50	0.75	12.50	1.00	0.00	129.75
Weight on Bit (WOB)	10,000	25,000	20,000	25,000	25,000	30,000	35,000	35,000	35,000	35,000	35,000	35,000		
RPM	100	100	85	80	80	80	80	75	80	80	80	80		
Pump Pressure	712	900	800	850	820	875	875	920	925	950	950	950		
Drilling (Rotating) Hours	4.00	13.50	5.75	17.75	18.00	19.00	17.75	17.25	2.50	0.75	12.50	1.00	0.00	129.75

Daywork Hrs. (Operator's time)														
Rat Hole (>.75 Hrs)	0.25													0.25
Wait on Cement			4.00											4.00
Weather														0.00
Short Trip		3.25				1.00	1.50	1.25	1.50					8.50
Trip									9.00	10.75	3.25	3.75		26.75
Circulate				0.25	0.50			3.25	5.25	6.25	2.25	1.75		19.50
Tool									2.00	1.25	0.50			3.75
Testing									3.50	4.50	2.25			10.25
Clean Floor after DST														0.00
Logging												5.50		5.50
Nipple Down / Jet Cellar														0.00
LDDP / LDDC / Plug well												8.25		8.25
Run Casing / Circ / Cement			3.50											3.50
Set Slips														0.00
Lost Circulation (> 2 hrs)														0.00
Billable Hours	0.25	3.25	7.50	0.00	0.25	1.50	1.50	4.50	21.25	22.75	8.25	19.25	0.00	90.25

Non-Billable Hours (Southwind's time)														
Rig Up / Tear Down	16.50											3.00		19.50
Wait on Cement (NB)			8.00											8.00
Drill Rat Hole (<.75 hrs)	0.75													0.75
Drill Plug			0.50											0.50
Circulate / Trip (Surface)		1.00	0.50											1.50
Rig Repair			0.25		0.25	0.50	1.50			0.25	2.25	0.50		5.50
Connections	2.50	4.00	1.00	4.00	2.00	2.50	2.50	1.00			1.00			20.50
Jet/Displace		1.50	0.50	1.50	1.25		0.50	0.50		0.25				6.00
Surveys									0.25				0.25	0.50
Rig Check		0.75		0.75	0.25	0.50	0.25	0.75						3.25
Stuck in hole					1.00									1.00
Circulate (NB)					1.00									1.00
Lost Circulation (< 2 hrs)														0.00
Lay Down Kelly / MH & RH														0.00
Non-Billable Hrs.	19.75	7.25	10.75	6.25	5.75	3.50	4.75	2.25	0.25	0.50	3.25	3.75	0.00	68.00

Footage Cost	\$ 6,380.00	\$ 10,626.00	\$ 4,444.00	\$ 10,472.00	\$ 6,127.00	\$ 6,281.00	\$ 4,675.00	\$ 3,036.00	\$ 484.00	\$ 176.00	\$ 2,772.00	\$ 132.00	\$ -	\$ 55,605.00
Daywork Cost	\$ 83.75	\$ 1,088.75	\$ 2,512.50	\$ -	\$ 83.75	\$ 502.50	\$ 502.50	\$ 1,507.50	\$ 7,118.75	\$ 7,621.25	\$ 2,763.75	\$ 6,448.75	\$ -	\$ 30,233.75
Combined Est. Cost*	\$ 6,463.75	\$ 11,714.75	\$ 6,956.50	\$ 10,472.00	\$ 6,210.75	\$ 6,783.50	\$ 5,177.50	\$ 4,543.50	\$ 7,602.75	\$ 7,797.25	\$ 5,535.75	\$ 6,580.75	\$ -	\$ 85,838.75

*Please note that this is estimated footage & daywork cost only. Additional charges will apply on invoice (fuel surcharge, water transfer pump, etc)

DST #1 Info - Footage Interval: 4677' - 4731' "Cherokee Limestone" Recovery: 2475' Gas in Pipe 275' Gassy Heavy Oil Cut Mud 20' Oil Cut Mud	DST #2 Info - Footage Interval: 4764' - 4780' Recovery: 210' Gas in Pipe 45' Oil Cut Mud
DST #3 Info - Footage Interval: 4767' - 4791' "Mississippi" Recovery: 94' Gas in Pipe 63' Gassy Cut Water Cut Oily Mud	DST #4 Info - Footage Interval: Recovery:

Anhydrite @ 1536' - 1569'

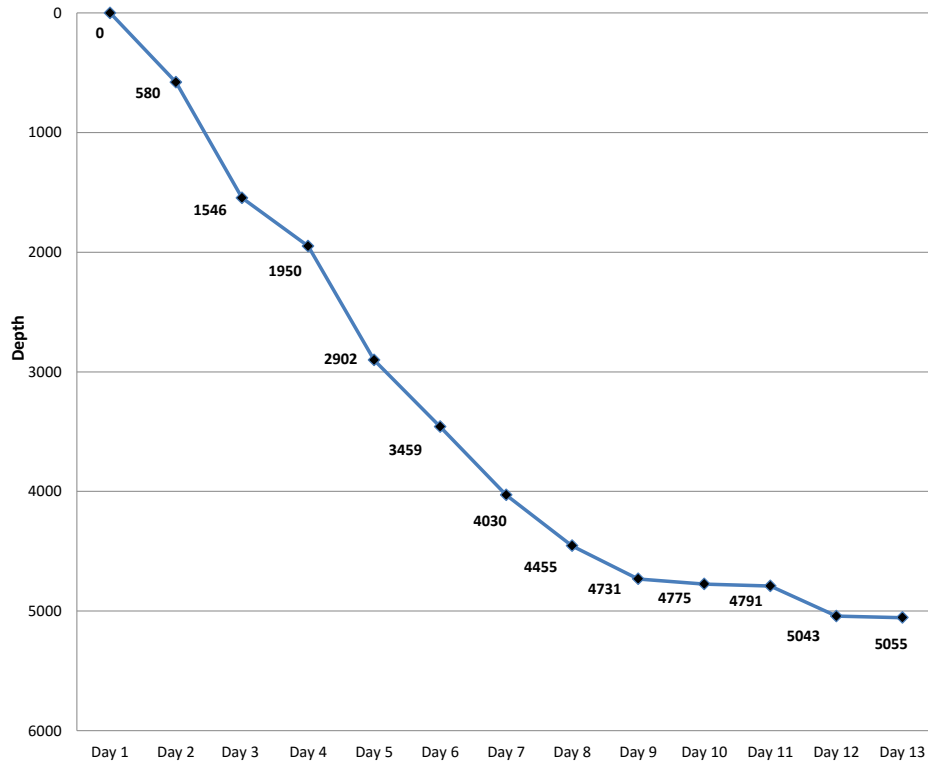
Displaced @ 3392' - 3424'



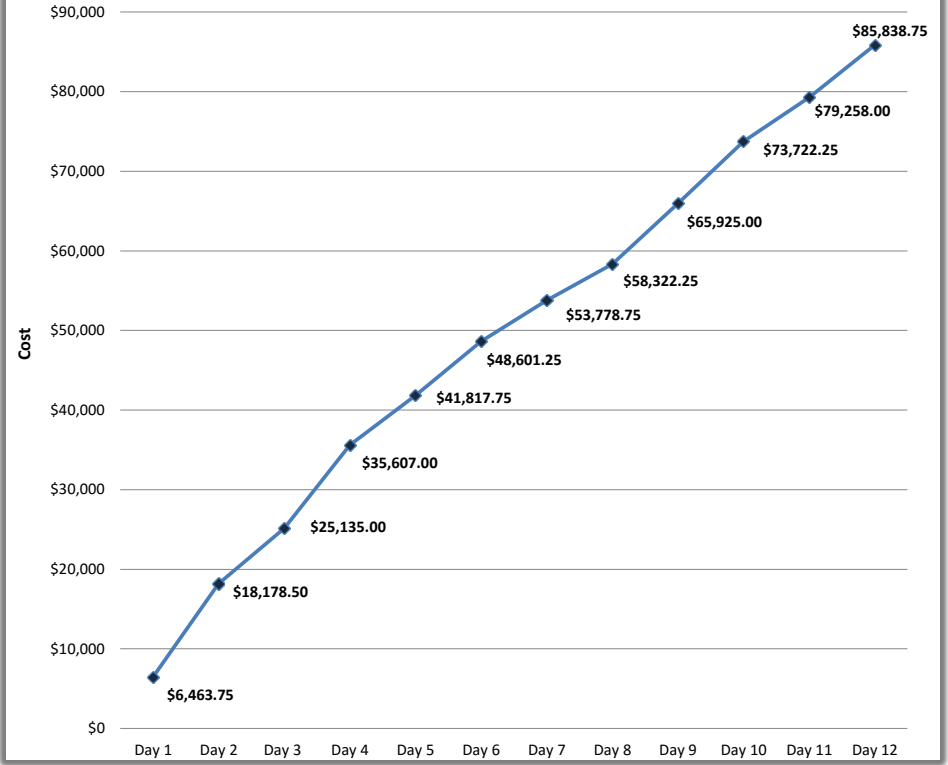
Job Summary Graphical Report

Southwind Rig No. 8
Durler #1

Days vs Depth



Days vs Cost



MORNING DRILLING REPORT

For: H&D Exploration, LLC

SOUTHWIND DRILLING, INC.

RIG No. 8

Well Name: Durler #1
 Location: 1127' FNL & 1120' FWL
 Section: 32-24S-22W
 County: Hodgeman
 API: 15-083-21924-00-00

GL Elevation: 2420'
 KB: 2430'
 Est. TD: 4600'
 Conductor Pipe: N/A

Rig No. 8 (Pusher Bill Sanders) 620 617-0706
 Rig No. 8 (Doghouse) 620 566-7156
 Southwind Drilling Office 620 564-3800



Surface Casing: Ran 37 joints of 23#, 8 5/8" casing, Tally @ 1534', Set @ 1545', used 600 sacks of 60/40 Poz, 3% cc, 2% gel, 1/2# Flo-seal, cement circulated, by Quality (Ticket #1738), plug down 11:00 am on 07.09.16.

Plugging Info: Plugged well with 170 sacks of 60/40 Poz, 4% gel, 2% cc, 1/4# Flo-seal, 1st plug @ 1575' w/ 50 sacks, 2nd plug @ 800' w/ 50 sacks, 3rd plug @ 60' w/ 20 sacks, 30 sacks for Rat hole, 20 sacks for Mouse hole, cemented, by Global (Ticket # _____), job complete @ 4:00 am on 07.19.16.

Rotary Total Depth: 5055'
 Log Total Depth: 5052'

Geologist: Jim Musgrove

7:00 A.M. Depth: 5055' 7:00 A.M. Current Operation: TEAR DOWN

Spud Date & Time:	07/07/16	07/08/16	07/09/16	07/10/16	07/11/16	07/12/16	07/13/16	07/14/16	07/15/16	07/16/16	07/17/16	07/18/16	07/19/16	Total
07/08/2016 @ 12:30 AM	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	
Total Depth (7:00am)	0	580	1546	1950	2902	3459	4030	4455	4731	4775	4791	5043	5055	5055
Daily Progress	580	966	404	952	557	571	425	276	44	16	252	12		5055
Ft. Per Hr.	145.00	71.56	70.26	53.63	30.94	30.05	23.94	16.00	17.60	21.33	20.16	12.00	#DIV/0!	38.96
Current Operation (7:00am)	Rig Up	Drilling	TOWB	Drilling	Drilling	CTCH	Drilling	Drilling	Short Trip	CFS	DST #3	Drilling	Tear Down	
Formation	Surface	Surface	Redbed	Redbed / Shale	Shale / Lime	Shale	Shale / Lime	Shale / Lime	Lime	Cherokee Lime	Mississippi	Mississippi	Lime	
Fuel Used (32.4 Gal/Inch)	162.00	307.80	243.00	453.60	486.00	453.60	388.80	421.20	243.00	145.80	453.60	259.20		4017.60
Survey (degree & depth)		1° @ 1546'							3/4° @ 4731'			3/4° @ 5055'		

Mud Cost	\$0.00	\$658.00	\$224.00	\$0.00	\$2,870.18	\$854.82	\$1,194.00	\$0.00	\$0.00	\$0.00	\$835.16	\$297.86		\$6,934.02
Weight (# / Gal)		9.5	8.7	9.0	8.5	9.1	9.4	9.4	9.3	9.2	9.5			
Vis (Funnel)		50	28	28	40	40	46	45	55	51	53			
Water Loss (cc)						9.1	10.4	10.4	12.0	12.0	11.2			

Bit #1														
Bit Make / Type	JZ	JZ												
Bit Size	12 1/4	12 1/4												
Bit Hours	4.00	13.50												17.50
Bit #2														
Bit Make / Type			Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	Reed S52P	
Bit Size			7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	
Bit Hours			5.75	17.75	18.00	19.00	17.75	17.25	2.50	0.75	12.50	1.00		112.25
Bit Cumulative Hours	4.00	13.50	5.75	17.75	18.00	19.00	17.75	17.25	2.50	0.75	12.50	1.00	0.00	129.75
Weight on Bit (WOB)	10,000	25,000	20,000	25,000	25,000	30,000	35,000	35,000	35,000	35,000	35,000	35,000		
RPM	100	100	85	80	80	80	80	75	80	80	80	80		
Pump Pressure	712	900	800	850	820	875	875	920	925	950	950	950		
Drilling (Rotating) Hours	4.00	13.50	5.75	17.75	18.00	19.00	17.75	17.25	2.50	0.75	12.50	1.00	0.00	129.75

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Rat Hole (>.75 Hrs)	0.25													0.25
Wait on Cement			4.00											4.00
Weather														0.00
Short Trip		3.25				1.00	1.50	1.25	1.50					8.50
Trip									9.00	10.75	3.25	3.75		26.75
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Connections	2.50	4.00	1.00	4.00	2.00	2.50	2.50	1.00			1.00			20.50
Jet/Displace		1.50	0.50	1.50	1.25		0.50	0.50		0.25				6.00
Surveys									0.25				0.25	0.50
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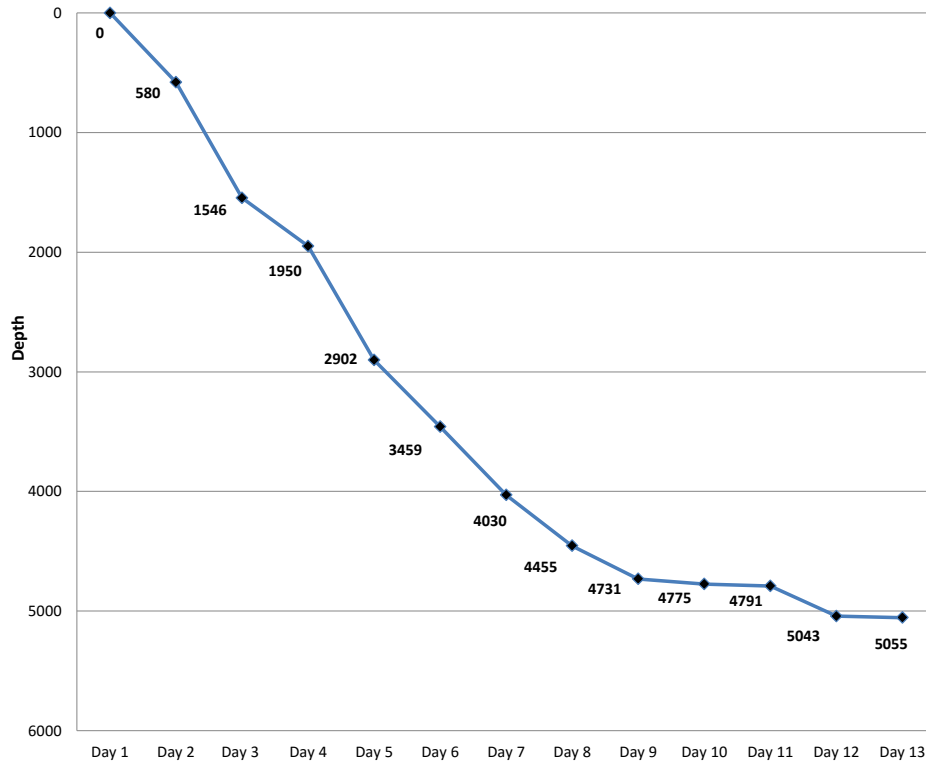


Job Summary Graphical Report

Southwind Rig No. 8

Durler #1

Days vs Depth



Days vs Cost

