

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) (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	Herrman 1
Doc ID	1308499

All Electric Logs Run

DIL
CDNL
ML
BCS

Form	ACO1 - Well Completion
Operator	H & D Exploration LLC
Well Name	Herrman 1
Doc ID	1308499

Tops

Name	Top	Datum
Anhydrite	788	+1076
Base anhydrite	812	+1052
Heebner	3096	-1232
Toronto	3106	-1242
Douglas	3126	-1262
Brown Lime	3190	-1326
Lansing	3201	-1337
Base Kansas City	3245	-1381
Conglomerate	3431	-1567
Arbuckle	3451	-1587
RTD	3505	-1641
LTD	3502	-1638

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

Home Office P.O. Box 32 Russell, KS 67665

No. 1701
5-24-16

Cell 785-324-1041

Date	5-23-16	Sec.	8	Twp.	19	Range	13	County	Barton	State	Ks	On Location		Finish	3:30 AM
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Location 281 + 4 Jct - 75 to NW 50 rd, 3E to

Lease	Herrman	Well No.	1	Owner	Sto Sian - 11/25, W15
Contractor	Southwind	#3		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Type Job	Surface			Charge To	H+D Exploration
Hole Size	12 1/4"	T.D.	344'	Street	
Csg.	8 5/8"	Depth	344'	City	
Tbg. Size		Depth		State	
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	15'	Shoe Joint	15'	Cement Amount Ordered	225 270 370 CC 276
Meas Line		Displace	21 BLS	225 60/40	3% CC 270 2% Gel

EQUIPMENT

Pumptrk	20	No.	Cementor	Rick	Common	135
			Helper		Poz. Mix	90
Bulktrk	9	No.	Driver	Doug	Gel.	5
			Driver		Calcium	10
Bulktrk	pu	No.	Driver	Brett		
			Driver			

JOB SERVICES & REMARKS

Remarks:	Cement did Circulate	Hulls	
Rat Hole		Salt	
Mouse Hole	Cut 100' Sand	Flowseal	
Centralizers		Kol-Seal	
Baskets		Mud CLR 48	
D/V or Port Collar		CFL-117 or CD110 CAF 38	
		Sand	
		Handling	240
		Mileage	

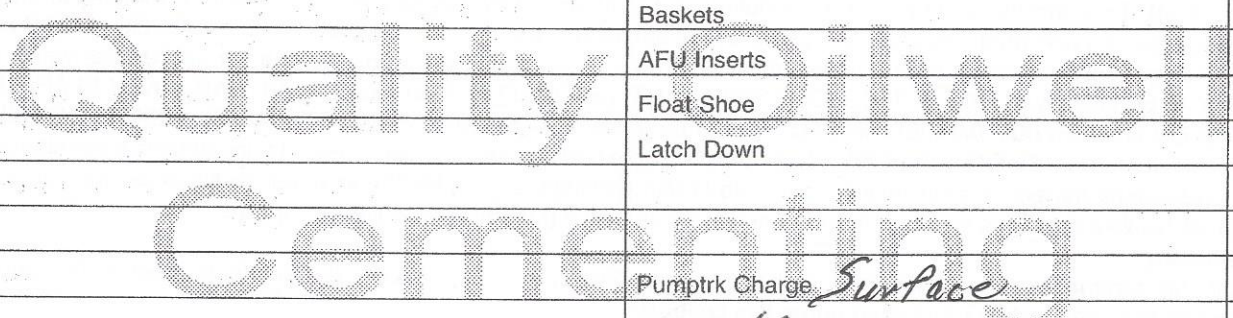
FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge	Surface
Mileage	10

X Signature *Jay Krue*

Tax	
Discount	
Total Charge	



QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1704

Date	5-30-16	Sec.	8	Twp.	19	Range	13	County	Barton	State	Ks	On Location		Finish	7:45AM
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Location: 281 + 4 Jet, S to NW 50rd, 3E to

Lease	Herrman	Well No.	1	Owner	Washington Ave, 1 3/4 S, W/S
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Contractor Southwind 3
To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Type Job	Longstring	Charge To	HD Exploration
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Hole Size	7 7/8"	T.D.	3505'
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Csg.	5 1/2" New 15.50	Depth	3497.43'
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Tbg. Size		Depth	
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Tool		Depth	
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Cement Left in Csg.	14.30'	Shoe Joint	14.30'
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Meas Line		Displace	82 3/4 BLS
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EQUIPMENT			Common	440
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Pumptrk	20	No.	Cement Helper	Brett
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Bulktrk	21	No.	Driver	Doung
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Bulktrk	P.U.	No.	Driver	Rick
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JOB SERVICES & REMARKS			Hulls	
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Remarks:		Salt	
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Rat Hole		Flowseal	520#
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Mouse Hole		Kol-Seal	
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Centralizers	4, 7, 9, 11	Mud CLR 48	500
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Baskets	27, 36, 45, 51, 57, 62, 66, 69	CFL-117 or CD110 CAF 38	
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D/V or Port Collar	pipe on bottom break	Sand	
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Circulation pump	500 gal Mud	Handling	440
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Clear 48, plug	lathok w/ 30 50	Mileage	
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Hook to	5 1/2" casing + mix 410	FLOAT EQUIPMENT	
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Cement	shut down wash pump	Guide Shoe	
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+ lines	released plug +	Centralizer	4
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Displaced w/	82 3/4 BLS	Baskets	8
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of H2O		AFU Inserts	
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Released + held.		Float Shoe	
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Lift pressure	800 #	Latch Down	
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Land plug to	1800 #	Pumptrk Charge	prod string
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Cement did not circulate		Mileage	10
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X Signature

Tax
Discount
Total Charge

MORNING DRILLING REPORT

SOUTHWIND DRILLING, INC.

For: H&D Exploration, LLC

RIG No. 3

Well Name: Herrman #1
 Location: 2119' FNL & 1848' FEL
 Section: 8-19S-13W
 County: Barton
 API: 15-009-26142-00-00

GL Elevation: 1856'
 KB: 1864'
 Est. TD: 3400'
 Conductor Pipe: N/A

Rig No. 3 (Pusher Jay Krier) 620 617-4477
 Rig No. 3 (Doghouse) 620 566-7104
 Southwind Drilling Office 620 564-3800



Surface Casing: Ran 8 joints of new 20#, 8 5/8" casing, Tally @ 334.28', Set @ 344', used 225 sacks of 60/40 Poz, 3% cc, 2% gel, cement circulated, by Quality (Ticket #1701), plug down @ 3:30 am on 05.24.16.

Production Info: Ran 84 joints of new 15.5#, 5 1/2" casing, Tally @ 3489.43', Set @ 3497', used 440 sacks of 80/20 QMDC, 1/4# Flo, cemented, by Quality (Ticket #1704), job complete @ 7:45 am on 05.30.16.

Rotary Total Depth: 3505'
 Log Total Depth: 3503' Geologist: Jim Musgrave

7:00 A.M. Depth: 3505' 7:00 A.M. Current Operation: TEAR DOWN

Spud Date & Time:	05/23/16	05/24/16	05/25/16	05/26/16	05/27/16	05/28/16	05/29/16	05/30/16	Total
05/23/2016 @ 1:45 PM	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	
Total Depth (7:00am)	0	344	1765	2580	3257	3273	3425	3505	
Daily Progress	344	1421	815	677	16	152	80		3505
Ft. Per Hr.	80.94	96.34	47.94	39.25	21.33	30.40	45.71	#DIV/0!	57.70
Current Operation (7:00am)	Rig Up	WOC	Drilling	Drilling	Short Trip	TIWB	CFS	Tear Down	
Formation	Surface	Surface	Lime / Shale	Lime / Shale	Lime / Shale	Lime / Shale	Lime / Shale	Arbuckle	
Fuel Used (39 Gal/Inch)	234.00	312.00	351.00	351.00	234.00	195.00	156.00		1833.00
Survey (degree & depth)	1/2' @ 344'				3/4' @ 3257'				

Mud Cost	\$0.00	\$0.00	\$2,065.73	\$842.23	\$0.00	\$2,698.55	\$2,056.30		\$7,662.81
Weight (# / Gal)									
Vis (Funnel)									
Water Loss (cc)				9.6	12.2	16.0			

Bit #1									
Bit Make / Type	Reed RT								
Bit Size	12 1/4								
Bit Hours	4.25								4.25
Bit #2									
Bit Make / Type		Reed R24	Reed R24	Reed R24	Reed R24	Reed R24	Reed R24	Reed R24	
Bit Size		7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	
Bit Hours		14.75	17.00	17.25	0.75	5.00	1.75		56.50
Bit Cumulative Hours	4.25	14.75	17.00	17.25	0.75	5.00	1.75	0.00	60.75
Weight on Bit (WOB)	12,000	30,000	30,000	30,000	30,000	30,000	30,000		
RPM	120	80	80	80	80	80	80		
Pump Pressure	450	825	850	875	875	575	675		
Drilling (Rotating) Hours	4.25	14.75	17.00	17.25	0.75	5.00	1.75	0.00	60.75

Daywork Hrs. (Operator's time)										
Rat Hole (>.75 Hrs)										0.00
Wait on Cement										0.00
Weather										0.00
Short Trip					2.00	0.25				2.25
Trip	0.75				11.50	7.25	5.50			25.00
Circulate	0.25			2.50	4.50	7.00	4.75			19.00
Tool					1.25	0.50				1.75
Testing					5.50	2.75				8.25
Clean Floor after DST					0.25					0.25
Logging							5.00			5.00
Nipple Down / Jet Cellar							1.25			1.25
LDDP / LDDC							3.25			3.25
Run Casing / Circ / Cement	6.00						2.25	0.75		9.00
Set Slips								0.50		0.50
Lost Circulation (> 2 hrs)										0.00
Billable Hours	7.00	0.00	0.00	4.50	23.25	17.50	22.00	1.25		75.50

Non-Billable Hours (Southwind's time)										
Rig Up / Tear Down	7.50							6.75		14.25
Wait on Cement (NB)	3.50	4.50								8.00
Drill Rat Hole (<.75 hrs)	0.25									0.25
Drill Plug										0.00
Circulate / Trip (Surface)	0.50									0.50
Rig Repair			3.00			1.00				4.00
Connections	1.00	3.50	2.00	2.25		0.25	0.25			9.25
Jet/Displace		1.00	1.75							2.75
Surveys										0.00
Rig Check		0.25	0.25			0.25				0.75
Lost Circulation (< 2 hrs)										0.00
Lay Down Kelly / MH & RH										0.00
Non-Billable Hrs.	12.75	9.25	7.00	2.25	0.00	1.50	0.25	6.75		39.75

Footage Cost	\$ 3,440.00	\$ 14,210.00	\$ 8,150.00	\$ 6,770.00	\$ 180.00	\$ 1,520.00	\$ 800.00	\$ -	\$ 35,050.00
Daywork Cost	\$ 1,750.00	\$ -	\$ -	\$ 1,125.00	\$ 5,812.50	\$ 4,375.00	\$ 5,500.00	\$ 312.50	\$ 18,875.00
Combined Est. Cost*	\$ 5,190.00	\$ 14,210.00	\$ 8,150.00	\$ 7,895.00	\$ 5,972.50	\$ 5,895.00	\$ 6,300.00	\$ 312.50	\$ 53,925.00

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

<p>DST #1 Info -</p> <p>Footage Interval: 3194' - 3257' LKC "A-E"</p> <p>Recovery: 1008' Gas in Pipe 265' Gassy Oil Cut Mud</p>	<p>DST #2 Info -</p> <p>Footage Interval: 3257' - 3273' LKC "F"</p> <p>Recovery: Gas to Surface 1043' Clean Oil 50' Gassy Oil Cut Mud</p>
<p>DST #3 Info -</p> <p>Footage Interval: 324' - 3380' LKC "H-J"</p> <p>Recovery: 703' Gas in Pipe 431' Heavy Oil Gassy Cut Mud 126' Heavy Oil Cut Water</p>	<p>DST #4 Info -</p> <p>Footage Interval:</p> <p>Recovery:</p>

Anhydrite @ 750' - 776'

Displaced @ 2524' - 2575'

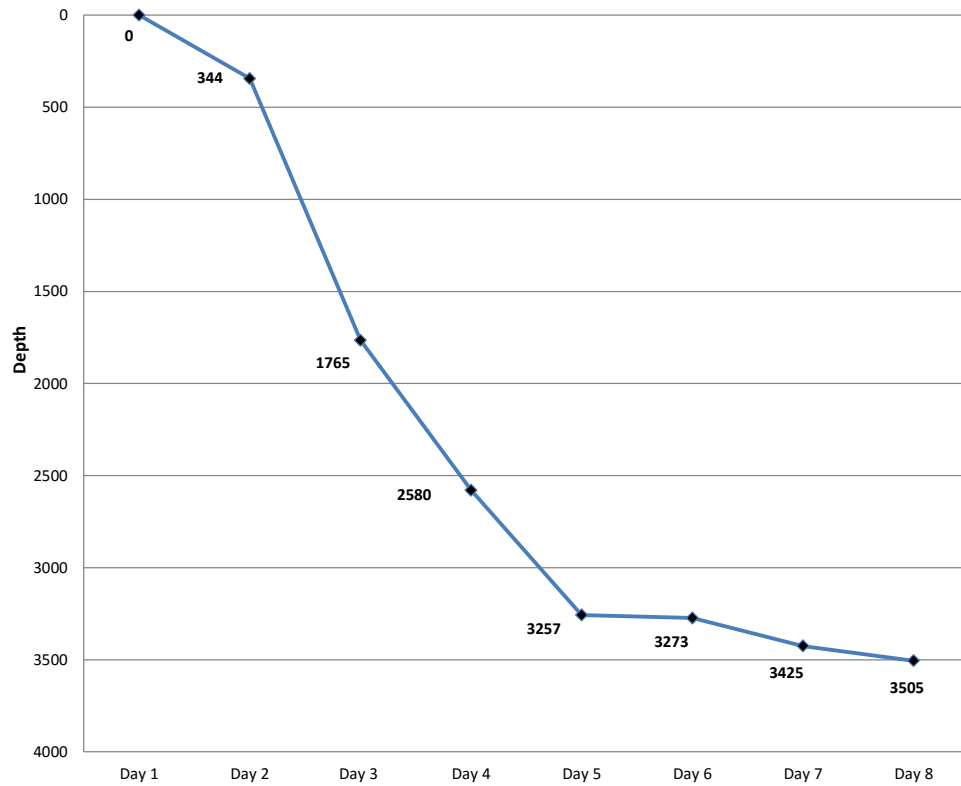


Job Summary Graphical Report

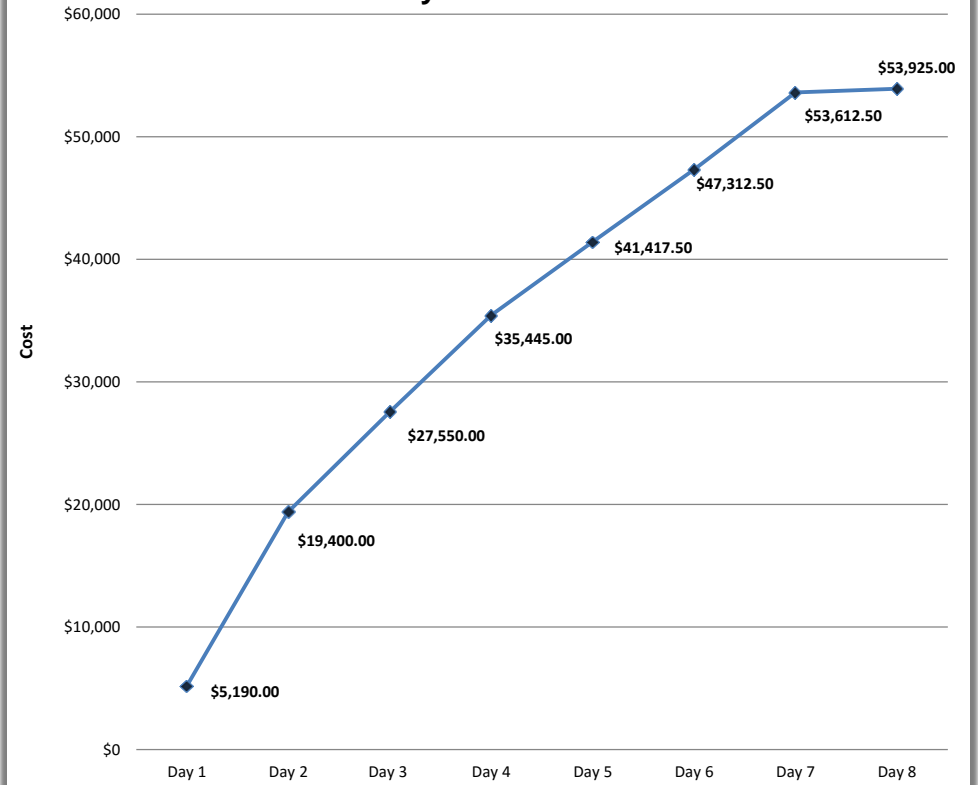
Southwind Rig No. 3

Herrman #1

Days vs Depth



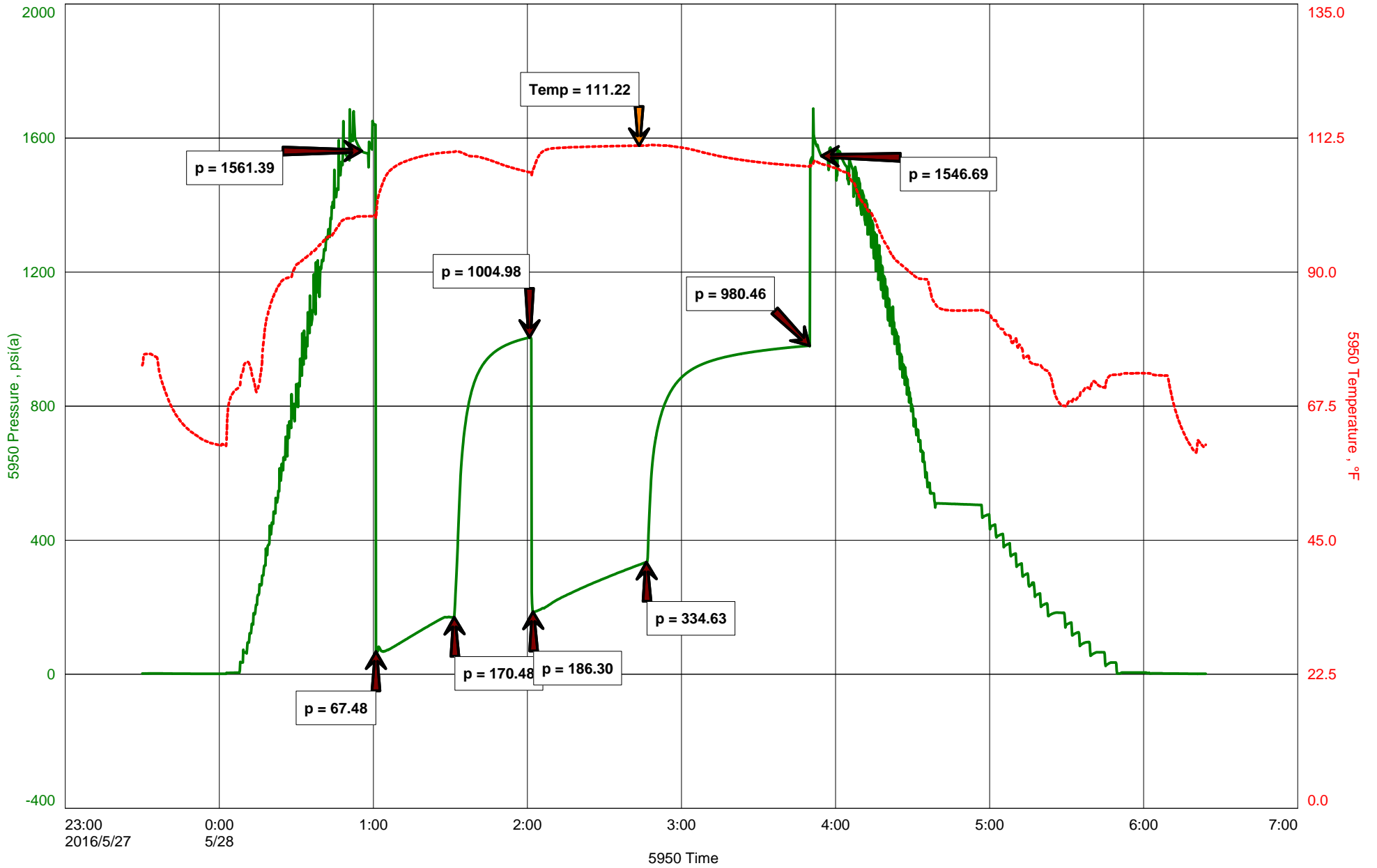
Days vs Cost

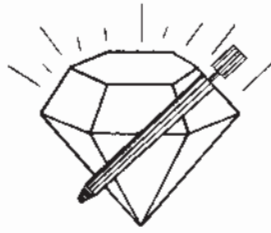


H&D Exploration
Dst #2 Lans 'F' 3256-3273'
Start Test Date: 2016/05/27
Final Test Date: 2016/05/28

Herrman #1
Formation: Dst #2 Lans 'F' 3256-3273'
Pool: Infield
Job Number: P0110

Herrman #1





DIAMOND TESTING
 P. O. Box 157
HOISINGTON, KANSAS 67544
 (316) 653-7550
GAS VOLUME REPORT

Company H&D Exploration Lease & Well No. Herrman #1
 Date 5-28-16 Sec. 8 Twp. 19S Rge. 13W Location _____ County Barton State KS
 Drilling Contractor SouthWind Drilling Rig #3 Formation Lans F DST No. 2
 Remarks: GAS TO SURFACE AT 30 MINUTES INTO INITIAL FLOW PERIOD. GAS DID BURN. SAMPLE TAKEN 30 MINUTES INTO FINAL FLOW PERIOD.

INITIAL FLOW

Time O'Clock	Orifice Size	Gauge	CF/D
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	
	in.	in.	

FINAL FLOW IW

Time O'Clock	Orifice Size	Gauge	CF/D
5	1/8 in.	25 in.	2.64
10	1/8 in.	33 in.	3.04
15	1/8 in.	31 in.	2.94
20	1/8 in.	28 in.	2.79
25	1/8 in.	25 in.	2.64
30	1/8 in.	25 in.	2.64
35	1/8 in.	23 in.	2.55
40	1/8 in.	20 in.	2.36
45	1/8 in.	18 in.	2.24
	in.	in.	



Hoisington, Kansas

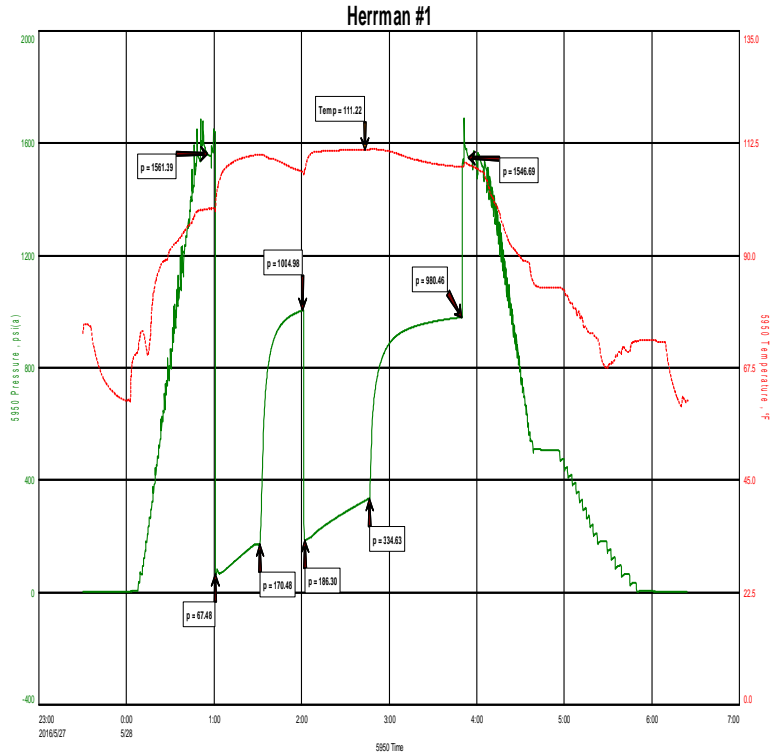
Michael Carroll
620-617-0368
carroll.dtlc@gmail.com

General Information

Company Name H&D Exploration

Contact	Mitch Driscoll
Well Name	Herrman #1
Unique Well ID	Dst #2 Lans 'F' 3256-3273'
Surface Location	Sec 8-19s-13w Barton County
Field	Walnut Creek
Well Type	Vertical
Test Type	Drill Stem Test
Well Operator	H&D Exploration

Formation	Dst #2 Lans 'F' 3256-3273'
Well Fluid Type	01 Oil
Test Purpose	Initial Test
Start Test Date	2016/05/27
Start Test Time	23:30:00
Final Test Time	06:25:00
Job Number	P0110
Report Date	2016/05/28
Prepared By	Michael Carroll



TEST RECOVERY

Remarks Recovery:

Gas To Surface

1043' Clean Oil Gravity 24 @ 60 Degrees

50' GCWCMO 12%G 46%O 12%W 30%M

Total Fluid: 1093'

Tool Sample: 100%O



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

TIME ON: 2330 5-27
TIME OFF: 0625 5-28

Company H&D EXPLORATION Lease & Well No. HERRMAN #1
Contractor SOUTHWIND DRLG RIG 3 Charge to H&D EXPLORATION
Elevation 1856 Formation LANS F Effective Pay _____ Ft. Ticket No. P0110
Date 5-28-16 Sec. 8 Twp. _____ 19 S Range _____ 13 W County BARTON State KANSAS
Test Approved By JIM MUSGROVE Diamond Representative Michael Carroll

Formation Test No. 2 Interval Tested from 3256 ft. to 3273 ft. Total Depth 3273 ft.
Packer Depth 3251 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 3256 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____
Top Recorder Depth (Inside) 3244 ft. Recorder Number 5950 Cap. 5000 P.S.I.
Bottom Recorder Depth (Outside) 3260 ft. Recorder Number 0230 Cap. 5000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 47 Drill Collar Length _____ ft. I.D. 2 1/4 in.
Weight 9.1 Water Loss 12.2 cc. Weight Pipe Length _____ ft. I.D. 2 7/8 in.
Chlorides 16000 P.P.M. Drill Pipe Length 3231 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number NA Test Tool Length 25 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NO Reversed Out NO Anchor Length 17 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: 3"BLOW-BUILT TO BOB IN 45 SECONDS GTS AT 30 MINUTES BBBB
2nd Open: 3"BLOW-BUILT TO BOB IN 1 MINUTE 35 SECONDS GTS THROUGHOUT BBBB

Recovered _____ ft. of GAS TO SURFACE
Recovered 1043 ft. of CLEAN OIL GRAVITY 24 @ 60 DEGREES
Recovered 50 ft. of GCWCMO 12%G 46%O 12%W 30%M
Recovered 1093 ft. of TOTAL FLUID

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

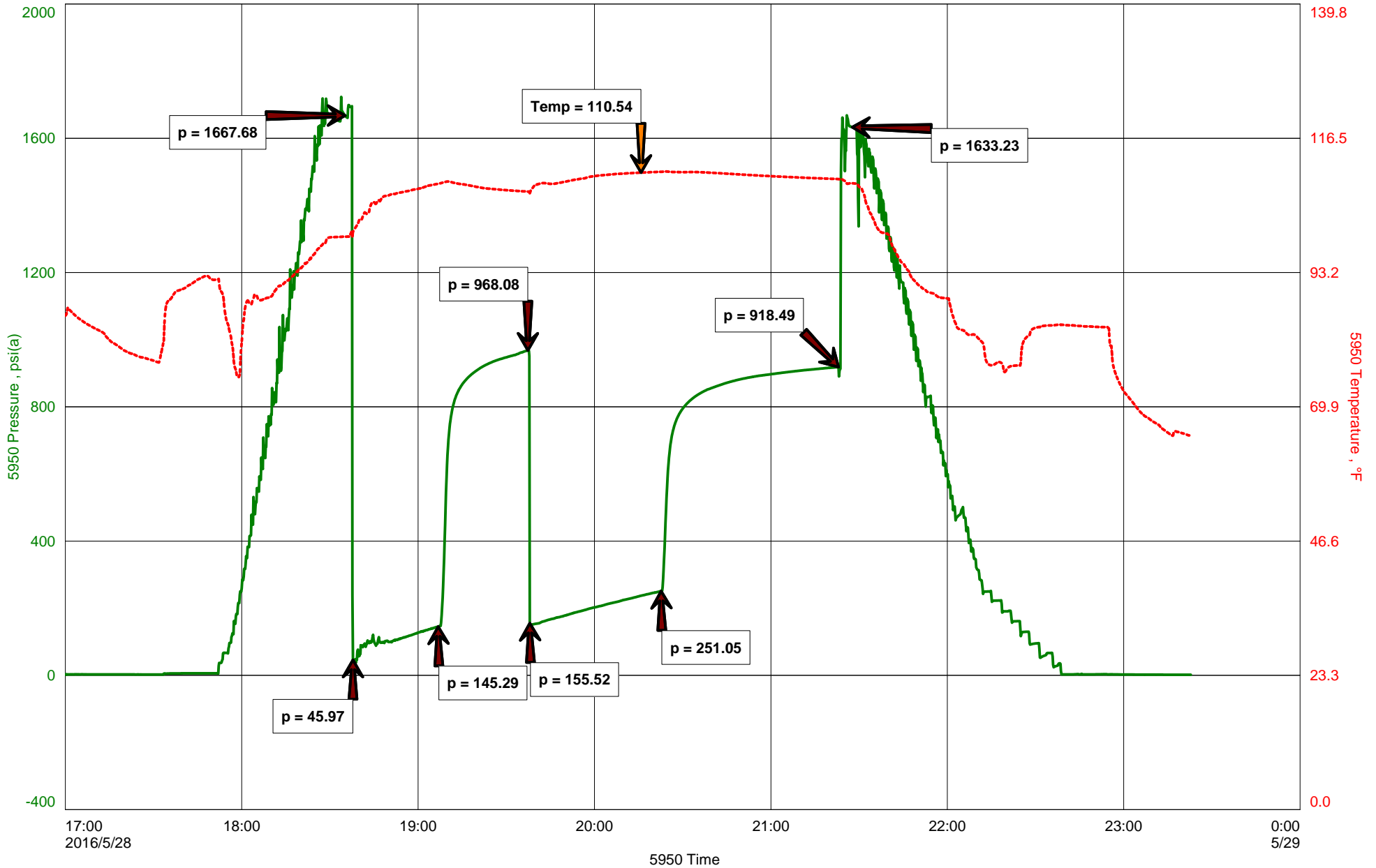
Time Set Packer(s) 1:00A.M. A.M. P.M. Time Started Off Bottom 3:45A.M. A.M. P.M. Maximum Temperature 111
Initial Hydrostatic Pressure..... (A) 1561 P.S.I.
Initial Flow Period..... Minutes 30 (B) 67 P.S.I. to (C) 170 P.S.I.
Initial Closed In Period..... Minutes 30 (D) 1005 P.S.I.
Final Flow Period..... Minutes 45 (E) 186 P.S.I. to (F) 335 P.S.I.
Final Closed In Period..... Minutes 60 (G) 980 P.S.I.
Final Hydrostatic Pressure..... (H) 1547 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.

H&D Exploration
Dst #3 Lans/KC 'H-J' 3324-3380'
Start Test Date: 2016/05/28
Final Test Date: 2016/05/28

Herrman #1
Formation: Dst #3 Lans/KC 'H-J' 3324-3380'
Pool: Infield
Job Number: P0111

Herrman #1





Hoisington, Kansas

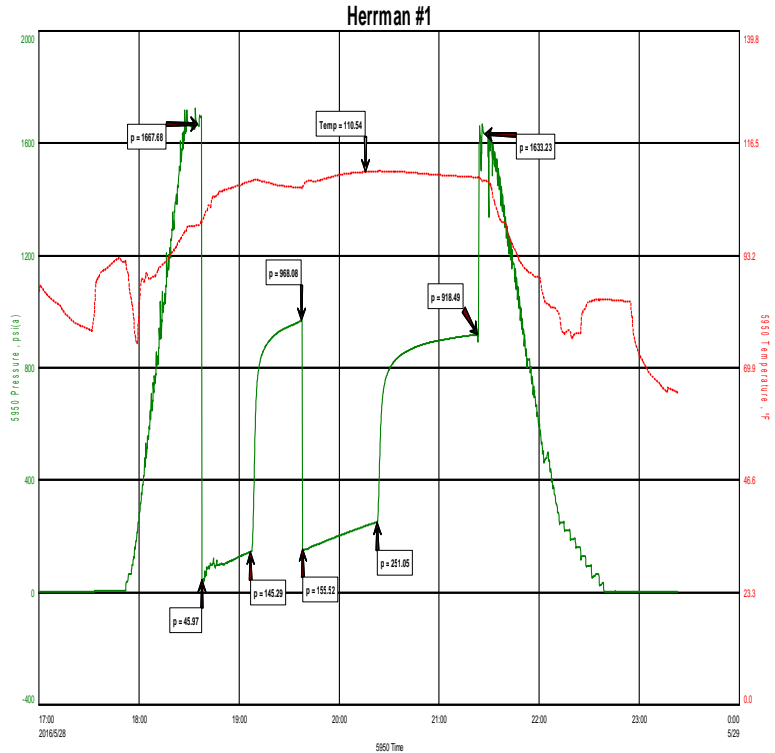
Michael Carroll
620-617-0368
carroll.dtlc@gmail.com

General Information

Company Name H&D Exploration

Contact	Mitch Driscoll
Well Name	Herrman #1
Unique Well ID	Dst #3 Lans/KC 'H-J' 3324-3380'
Surface Location	Sec 8-19s-13w Barton County
Field	Walnut Creek
Well Type	Vertical
Test Type	Drill Stem Test
Well Operator	H&D Exploration

Formation	Dst #3 Lans/KC 'H-J' 3324-3380'
Well Fluid Type	01 Oil
Test Purpose	
Start Test Date	2016/05/28
Start Test Time	17:00:00
Final Test Time	23:23:00
Job Number	P0111
Report Date	2016/05/28
Prepared By	Michael Carroll



TEST RECOVERY

Remarks	Recovery:	703'	Gas In Pipe				
		116'	GWCOM	14%G	26%O	15%W	45%M
		189'	GWCMCO	20%G	50%O	20%W	10%M
		126'	Clean Oil	Gravity 18.5 @ 60 Degrees			
		126'	SLOCMW	4%O	93%W	3%M	

Total Fluid: 557'

Tool Sample: 45%O 54%W 1%M

Chlorides 70000 PPM
RW .1 @ 75 Degrees
PH 7



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

TIME ON: 1700
TIME OFF: 2323

Company H&D EXPLORATION Lease & Well No. HERRMAN #1
Contractor SOUTHWIND DRLG RIG 3 Charge to H&D EXPLORATION
Elevation 1856 Formation LANS/KC H-J Effective Pay _____ Ft. Ticket No. P0111
Date 5-28-16 Sec. 8 Twp. _____ 19 S Range _____ 13 W County BARTON State KANSAS
Test Approved By JIM MUSGROVE Diamond Representative Michael Carroll

Formation Test No. 3 Interval Tested from 3324 ft. to 3380 ft. Total Depth 3380 ft.
Packer Depth 3319 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 3324 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3312 ft. Recorder Number 5950 Cap. 5000 P.S.I.
Bottom Recorder Depth (Outside) 3361 ft. Recorder Number 0230 Cap. 5000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 57 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.1 Water Loss 16 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
Chlorides 28000 P.P.M. Drill Pipe Length 3299 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number NA Test Tool Length 25 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NO Reversed Out NO Anchor Length 56(24.5A) 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 "BLOW-BUILT TO BOB IN 3 MINUTES 40 SECONDS 1/4"BB
2nd Open: 1 "BLOW-BUILT TO BOB IN 8 MINUTES 30 SECONDS 8 1/2"BB

Recovered 703 ft. of GAS IN PIPE CHLORIDES 70000 PPM
Recovered 116 ft. of GWCOM 14%G 26%O 15%W 45%M RW .1 @ 75 DEGREES
Recovered 189 ft. of GWCMCO 20%G 50%O 20%W 10%M PH 7
Recovered 126 ft. of CLEAN OIL GRAVITY 18.5 @ 60 DEGREES
Recovered 126 ft. of SLOCMW 4%O 93%W 3%M
Recovered 557 ft. of TOTAL FLUID

Remarks: _____
TOOL SAMPLE: 45%O 54%W 1%M

Time Set Packer(s) 6:35 P.M. A.M. P.M. Time Started Off Bottom 9:20 P.M. A.M. P.M. Maximum Temperature 111

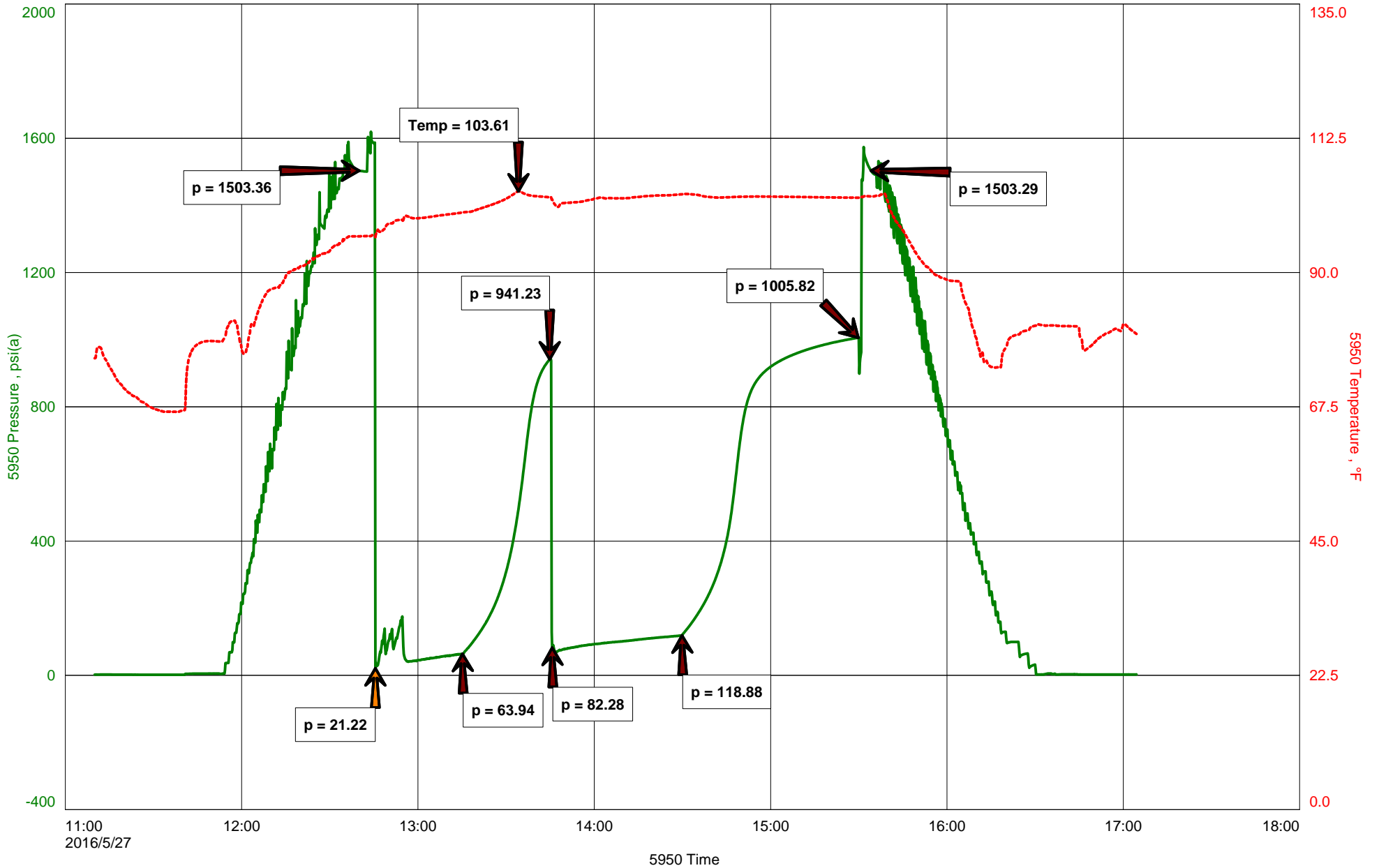
Initial Hydrostatic Pressure..... (A) 1668 P.S.I.
Initial Flow Period..... Minutes 30 (B) 46 P.S.I. to (C) 145 P.S.I.
Initial Closed In Period..... Minutes 30 (D) 968 P.S.I.
Final Flow Period..... Minutes 45 (E) 156 P.S.I. to (F) 251 P.S.I.
Final Closed In Period..... Minutes 60 (G) 918 P.S.I.
Final Hydrostatic Pressure..... (H) 1633 P.S.I.

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H&D Exploration
Dst #1 Upper Lans 3194-3257'
Start Test Date: 2016/05/27
Final Test Date: 2016/05/27

Herrman #1
Formation: Dst #1 Upper Lans 3194-3257'
Pool: Infield
Job Number: P0109

Herrman #1





Hoisington, Kansas

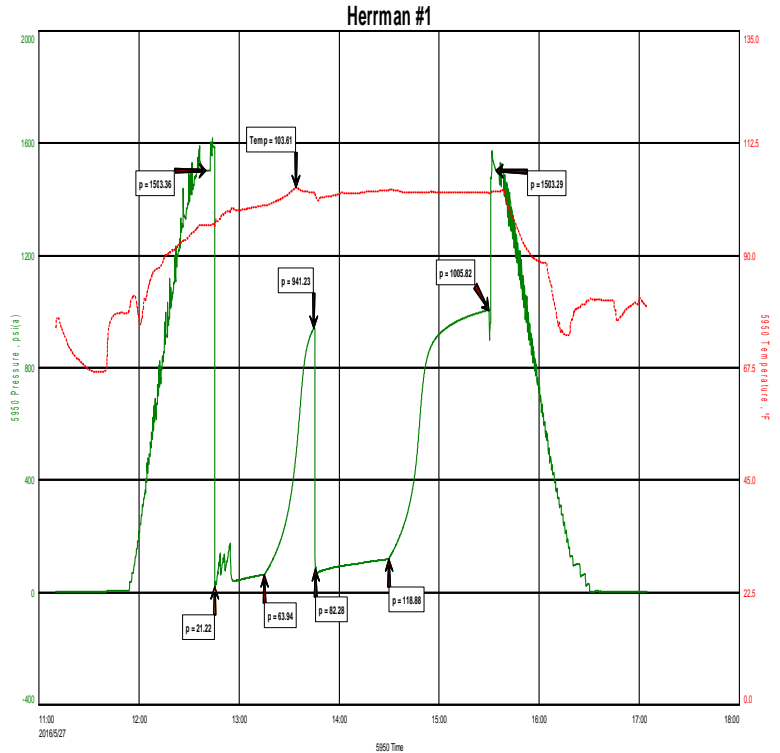
Michael Carroll
620-617-0368
carroll.dtlc@gmail.com

General Information

Company Name H&D Exploration

Contact Mitch Driscoll
Well Name Herrman #1
Unique Well ID Dst #1 Upper Lans 3194-3257'
Surface Location Sec 8-19s-13w Barton County
Field Walnut Creek
Well Type Vertical
Test Type Drill Stem Test
Well Operator H&D Exploration

Formation Dst #1 Upper Lans 3194-3257'
Well Fluid Type 01 Oil
Test Purpose Initial Test
Start Test Date 2016/05/27
Start Test Time 11:10:00
Final Test Time 17:05:00
Job Number P0109
Report Date 2016/05/27
Prepared By Michael Carroll



TEST RECOVERY

Remarks	Recovery:	1008'	Gas In Pipe				
		63'	GSLWCOM	20%G	30%O	5%W	45%M
		126'	GSLWCMO	20%G	45%O	5%W	30%M
		63'	SLGCHOCWM	5%G	55%O	10%W	30%M
	Total Fluid:	252'					
	Tool Sample:	65%O	15%W	20%M			



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

TIME ON: 1110
TIME OFF: 1705

Company H&D EXPLORATION Lease & Well No. HERRMAN #1
Contractor SOUTHWIND DRLG RIG 3 Charge to H&D EXPLORATION
Elevation 1856 Formation LANS A-E Effective Pay _____ Ft. Ticket No. P0109
Date 5-27-16 Sec. 8 Twp. 19 S Range 13 W County BARTON State KANSAS
Test Approved By JIM MUSGROVE Diamond Representative Michael Carroll

Formation Test No. 1 Interval Tested from 3194 ft. to 3257 ft. Total Depth 3257 ft.
Packer Depth 3189 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 3194 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____
Top Recorder Depth (Inside) 3182 ft. Recorder Number 5950 Cap. 5000 P.S.I.
Bottom Recorder Depth (Outside) 3231 ft. Recorder Number 0230 Cap. 5000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 53 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.2 Water Loss 9.6 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
Chlorides 11000 P.P.M. Drill Pipe Length 3169 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number NA Test Tool Length 25 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NO Reversed Out NO Anchor Length 63(31.5A) 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 10 MINUTES WSBB
2nd Open: 8" BLOW-BUILT TO BOB IN 1 MINUTE 7"BB

Recovered 1008 ft. of GAS IN PIPE
Recovered 63 ft. of GSLWCOM 20%G 30%O 5%W 45%M
Recovered 126 ft. of GSLWCMO 20%G 45%O 5%W 30%M
Recovered 63 ft. of SLGCHOCWM 5%G 55%O 10%W 30%M

Recovered <u>252</u> ft. of <u>TOTAL FLUID</u>	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
TOOL SAMPLE: <u>65%O 15%W 20%M</u>	Total

Time Set Packer(s) 12:42 P.M. ^{A.M.}/_{P.M.} Time Started Off Bottom 3:27 P.M. ^{A.M.}/_{P.M.} Maximum Temperature 104

Initial Hydrostatic Pressure..... (A) 1503 P.S.I.
Initial Flow Period..... Minutes 30 (B) 21 P.S.I. to (C) 64 P.S.I.
Initial Closed In Period..... Minutes 30 (D) 941 P.S.I.
Final Flow Period..... Minutes 45 (E) 82 P.S.I. to (F) 119 P.S.I.
Final Closed In Period..... Minutes 60 (G) 1006 P.S.I.
Final Hydrostatic Pressure..... (H) 1503 P.S.I.

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