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 # 33936
Name: Griffin, Charles N.
Address 1: PO BOX 347
Address 2:
City: PRATT State: KS Zip: 67124 + 0347
Contact Person: Charles N. Griffin
Phone: (620) 672-9700
CONTRACTOR: License # 33575
Name: WW Drilling, LLC
Wellsite Geologist: Bruce A. Reed
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 #:

5/7/2018	05/26/2018	6/28/2018
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-151-22470-01-00
Spot Description:
SW - SE - SW - SW Sec. 29 Twp. 29 S. R. 15 ☐ East ☑ West
165 Feet from ☐ North / ☑ South Line of Section
800 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☑ SW
GPS Location: Lat: *(e.g. xx.xxxxx)*, Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Pratt
Lease Name: DONNA Well #: 1H
Field Name:
Producing Formation: Viola
Elevation: Ground: 2021 Kelly Bushing: 2041
Total Vertical Depth: 4062 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 371 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: 0 ppm Fluid volume: 0 bbls
Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite:

Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

☐ **Confidentiality Requested**
Date: 08/14/2018
☐ **Confidential Release Date:** 08/13/2020
☐ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☐ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 08/20/2018

Operator Name: Griffin, Charles N. Lease Name: DONNA Well #: 1H

Sec. 29 Twp. 29 S. R. 15 ☐ East ☑ West County: Pratt

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 ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Geologist Report / Mud Logs ☑ Yes ☐ No

List All E. Logs Run:

Neutron Density
Density Image
Gamma Ray

☐ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ 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
Surface	12.25	9.625	36	371	Common	200	Calcium Chloride, Bentonite Gel
Intermediate	8.75	7	26	5407	AA2	270	Salt Bentonite Gel, Kol Seal
Liner	6.125	4.5	11.6	7748	no cement	0	no product

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: 06/28/2018

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: ☐ Vented ☑ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION: ☑ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*

PRODUCTION INTERVAL:

Top	Bottom
5540	7658

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At: 5417

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Griffin, Charles N.
Well Name	DONNA 1H
Doc ID	1415908

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	9.625	36	371	Common	200	Calcium Chloride, Bentonite Gel
Intermediate	8.75	7	26	5407	AA2	270	Salt Bentonite Gel, Kol Seal
Liner	6.125	4.5	11.6	7748	no cement	0	no product

250 N. Water, Ste 200 - Wichita, Ks 67202

HURRICANE SERVICES INC

104 Prairie Plaza Parkway - Garnett, Ks 66032

lnw 38004

Customer	Griffin Management	Customer Name:	JR Griffin		Ticket No.:	100916	
Address:	P.O. Box 347	Contractor:			Date:	5/9/2018	
City, State, Zip:	Pratt, KS	Job type	Surface		Well Type:	Oil	
Service District:	Medicine lodge,KS	Well Details:	Sec	29	Twp:	29s	R: 15w
Well name & No.	Donna 1H	Well Location:		County:	Pratt	State:	Kansas

Equipment #	Driver	Equipment #	Driver	Equipment #	Driver		AM/PM	
						TRUCK CALLED	AM PM	22:00
26	Fennis					ARRIVED AT JOB	AM PM	23:30
230	Joe					START OPERATION	AM PM	10:35
176/260	Devin					FINISH OPERATION	AM PM	11:38
						RELEASED	AM PM	12:00
						MILES FROM STATION TO WELL		35

Product/Service Code	Description	Unit of Measure	Quantity	List Price/Unit	Gross Amount	Net Amount
C001	Heavy Equip. One Way	mi	70.00	$3.25	$227.50	$170.63
c002	Light Equip. One Way	mi	35.00	$1.50	$52.50	$39.38
C003	Ton Mileage - One way	mi	345.45	$1.30	$449.09	$336.81
C019	Cement Pump	ea	1.00	$950.00	$950.00	$712.50
CP006	Regular - Class A Cement	sack	200.00	$16.25	$3,250.00	$2,437.50
CP016	Bentonite Gel	lb	376.00	$0.30	$112.80	$84.60
CP017	Calcium - Chloride	lb	564.00	$1.00	$564.00	$423.00
C025	Cementing equipment additional hours	hr	1.00	$1,050.00	$1,050.00	$787.50

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts may pay interest on the balance past due at the rate of 1 ½% per month or the maximum allowable by applicable state or federal laws if such laws limit interest to a lesser amount. In the event it is necessary to employ an agency and/or attorney to affect the collection of said account, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any and all discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount will become immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Discount rate is based on 30 days net payment terms or cash.

DISCLAIMER NOTICE:
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	Gross:	$ 6,655.89	Net: $4,991.91
Total Taxable	$ -	Tax Rate:	
Frac and Acid service treatments designed with intent to increase production on newly drilled or existing wells are not taxable.		Sale Tax:	$ -
		Total:	$ 4,991.91
Date of Service:	5/9/2018		
HSI Representative:	Fennis Garduno		

Customer Comments:

X

CUSTOMER AUTHORIZED AGENT

TREATMENT REPORT

HURRICANE SERVICES INC

Customer:	Griffin Management	Date:	5/9/2018
Field Rep:	JR Griffin	Ticket No.:	100916
Address:	P.O Box 347		
City, State:	Pratt KS		
County, Zip:			

Field Order No.:	100916	Open Hole:	12.25" - .0558 bbl/ft
Well Name:	Donna 1H	Casing Depth:	
Location:	Medicine Lodge KS	Casing Size:	9.625" 36 lb/ft - .0773
Formation:		Tubing Depth:	
Type of Service:	Cement	Tubing Size:	
Well Type:	Oil	Liner Depth:	
Age of Well:	New	Liner Size:	
Packer Type:		Liner Top:	
Packer Depth:		Liner Bottom:	
Treatment Via:		Total Depth:	

Perf Depths (ft)		Perfs
	Total Perfs	0

TIME	INJECTION RATE FLUID	INJECTION RATE N2/CO2	PRESSURE STP	PRESSURE ANNULUS	REMARKS	PROP (lbs)	HCL (gls)	FLUID (bbls)
11:30 PM					Arrive on location			
11:35 PM					Hold Safety Meeting			
11:40 PM					Spot in equiptment			
11:50 PM					Rig up equipment			
10:00 AM					Stab cement head , rig up floor			
10:35 AM	3.0		40.0		Pump 20 bbl H2O spacer			20.00
10:40 AM					Stopped getting water , clear line clear jet of rocks			
10:46 AM	3.0		40.0		Start Cement @ 14.8 ppg			
10:50 AM					Stopped getting water , clear line clear jet of rocks			
11:05 AM	4.0		140.0		25 bbls cement away scaled at 14.7 ppg			
11:16 AM	4.0		130.0		End of cement scaled at 14.8 ppg			50.00
11:17 AM					Shut down, stuff plug			
11:27 AM	3.0		50.0		Start displacment			
11:33 AM	3.0		60.0		13 bbls of displacement away			
11:38 AM					End of displacement			26.00
11:40 AM					Shut in per customer request , rig down			
12:00 PM					Leave location			
					Saw cement at 21 bbls into displacement = 5 bbls cement back			
					TOTAL:	-	-	96.00

SUMMARY

Max Fl. Rate	Avg Fl. Rate	Max PSI	Avg PSI
4.0	3.3	140.0	76.7

PRODUCTS USED

Rocks from rig tank clogged up densomiter, hand scaled through job

Treater: *Fennis Gardano*

Customer: ______________

Inv # 38092

HSI

250 N. Water, Ste 200 - Wichita, Ks 67202

HURRICANE SERVICES INC

104 Prairie Plaza Parkway - Garnett, Ks 66032

Customer	Griffin Mangment	Customer Name:	Ray Howard	Ticket No.:	100924
Address:	P.O. Box 347	AFE No.:		Date:	5/18/2018
City, State, Zip:	Pratt, KS	Job type	7" Intermediate		
Service District:	Medicine lodge, KS	Well Details:	sec- 29 twp- 29S Rng - 15W		
Well name & No.	Donna 1H	Well Location:	Sun city	County: Pratt	State: Kansas

Equipment #	Driver	Equipment #	Driver	Equipment #	Driver		AM/PM	
						TRUCK CALLED	AM PM	23:00
26	Fennis					ARRIVED AT JOB	AM PM	23:45
230	Joe					START OPERATION	AM PM	4:30
176/260	Daryl					FINISH OPERATION	AM PM	6:34
						RELEASED	AM PM	7:30
						MILES FROM STATION TO WELL		32

Product/Service Code	Description	Unit of Measure	Quantity	List Price/Unit	Gross Amount	Net Amount
C001	Heavy Equip. One Way	mi	64.00	$3.25	$208.00	$156.00
C002	Light Equip. One Way	mi	32.00	$1.50	$48.00	$36.00
C003	Ton Mileage - One way	mi	459.36	$1.30	$597.17	$447.88
C012	Cement Plug Container	job	1.00	$275.00	$275.00	$206.25
C019	Cement Pump	ea	1.00	$950.00	$950.00	$712.50
CP005	H-Long	sack	270.00	$17.00	$4,590.00	$3,442.50
CP016	Bentonite gel	lb	261.00	$0.30	$78.30	$58.73
CP018	Kol Seal	lb	1,350.00	$0.65	$877.50	$658.13
CP023	Salt	sack	30.00	$7.00	$210.00	$157.50
CP029	Defoamer	lb	66.00	$6.00	$396.00	$297.00
CP040	Fluid loss additive-cementing	lb	153.00	$8.25	$1,262.25	$946.69
CP032	Mud Flush	gal	500.00	$1.00	$500.00	$375.00
CP102	7" Float shoe	ea	1.00	$500.00	$500.00	$375.00
CP101	7" bow spring centrilizers	ea	5.00	$75.00	$375.00	$281.25
CP100	7" Float Collar	ea	1.00	$750.00	$750.00	$562.50
	7" ridgid body centrilizers	ea	14.00	$120.00	$1,680.00	$1,260.00
	7" top rubber plug	ea	1.00	$150.00	$150.00	$112.50
	7" stop ring	ea	1.00	$54.00	$54.00	$40.50

	Gross:	$ 13,501.22	Net: $ 10,125.91
Total Taxable	$ -	Tax Rate:	
Frac and Acid service treatments designed with intent to increase production on newly drilled or existing wells are not taxable.		Sale Tax:	$ -
		Total:	$ 10,125.91

HSI Representative: Fennis Garduno

Customer Comments:

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X____________________

CUSTOMER AUTHORIZED AGENT

TREATMENT REPORT

HURRICANE SERVICES INC

Customer:	Griffin Management	Date:	5/18/2018
Field Rep:	Ray Howard	Ticket No.:	100924
Address:			
City, State:			
County, Zip:			

Field Order No.:	100924	Open Hole:	9"
Well Name:	Donna 1H	Casing Depth:	5410.08'
Location:	Sun city ks	Casing Size:	7" 26 lb/ft
Formation:		Tubing Depth:	
Type of Service:	intermediate	Tubing Size:	
Well Type:	oil	Liner Depth:	
Age of Well:	new	Liner Size:	
Packer Type:		Liner Top:	
Packer Depth:		Liner Bottom:	
Treatment Via:		Total Depth:	

Perf Depths (ft)		Perfs
	Total Perfs	0

TIME	INJECTION RATE FLUID	INJECTION RATE N2/CO2	PRESSURE STP	PRESSURE ANNULUS	REMARKS	PROP (lbs)	HCL (gls)	FLUID (bbls)
11:00 PM					Arrive on location			
11:05 PM					Held safety meeting			
11:10 PM					Spot in equiptment			
11:15 PM					Rig up equiptment			
4:00 AM					Rig up floor			
4:30 AM	4.0		200.0		Pump 20 bbls H2O spacer			20.00
4:34 AM	3.0		170.0		Pump 12 bbls mud flush			12.00
4:39 AM	3.0		170.0		Pump 5 bbls H2O			5.00
4:42 AM	3.0		150.0		Start Cement at 14.8 ppg			
4:50 AM	2.0		150.0		20 bbls cement scaled at 14.7 ppg			
4:55 AM	2.0		150.0		30 bbls cement away at 14.8 ppg			
5:05 AM	1.5		120.0		40 bbls cement away scaled at 14.6 ppg			
5:12 AM	2.0		140.0		50 bbls cement away scaled at 14.8 ppg			
5:30 AM	2.0		140.0		60 bbls cement away scaled at 14.9 ppg			
5:45 AM	3.0		160.0		72 bbls cement away scaled at 14.8 ppg end of cement			72.00
5:48 AM					Shut down, dropped plug, plug lefg head			
5:53 AM					Start Production water displacement			
6:02 AM	5.0		110.0		50 bbls displacement away			
					TOTAL:	-	-	314.00

SUMMARY

Max Fl. Rate	Avg Fl. Rate	Max PSI	Avg PSI
5.0	3.2	900.0	237.3

PRODUCTS USED

Treater: *Fennis Gardano*

Customer:

TREATMENT REPORT

HURRICANE SERVICES INC

	INJECTION RATE		PRESSURE					
TIME	FLUID	N2/CO2	STP	ANNULUS	REMARKS	PROP (lbs)	HCL (gls)	FLUID (bbls)
6:18 AM	5.0		180.0		caught lift pressure at 135 bbls away			
6:22 AM	5.0		320.0		150 bbls displacement away			
6:29 AM	3.5		500.0		Slowed down to land plug at 190 bbls away			
6:34 AM	3.5		900.0		Land plug			205.00
					Check floats			
					wash up equiptment			
					Rig down equiptment			
					Leave location			
					HOC - 2261.43' TOC- 3148.65'			
					Height of mudflush/ water spacer - 3386.83'			
					Top of mudflush/ water spacer - 2023.25'			
					5410.08' 7" 26 lb/ft casing - .0382 bbl/ft			
					48.61' shoe track float collar at 5361.47' = 204.8 bbls displacemer			
					9" open hole - .0311 bbl/ft			
					Cement was foamy causing densomiter to read high			
					hand scaled through job and kept within 2/10 of desired wieght			

Activity provided on this page is calculated in the summary and totals on page 1

Gore Nitrogen
Pumping Service, LLC
P.O. Box 65
Seiling, OK 73663

GN2

Office: (580) 922-4660
Mobile: (580) 922-1498
Fax: (580) 922-4659

Field Ticket

Customer:	Charles Griffin	Field Ticket Number:	180252
	PO Box 347	Ticket Date:	06/12/18
	Pratt, KS 67124		
Formation:	Viola		
Well Name:	Donna 1H		
County:	Pratt	Date of Job:	12-Jun
State:	KS	Job Type:	12 Stage Foam Frac
Legal Desc:		Trucks:	

Description		Quantity	Unit Price	Unit	Total	Design Discounted Total	Discounted Total
Complete Acid System		72	$ 50.75	gal	$3,654.00	$1,461.60	$1,461.60
Powder Frac		875	$ 12.90	lb	$11,287.50	$6,460.32	$4,515.00
KCl Substitute Claymax		401	$ 54.00	gal	$21,654.00	$9,892.80	$8,661.60
Surfactant Flow Back 210E		197	$ 37.00	gal	$7,289.00	$3,241.20	$2,915.60
Foamer DF 100		770	$ 63.00	gal	$48,510.00	$21,042.00	$19,404.00
Liquid Biocide		60	$ 73.05	gal	$4,383.00	$1,928.52	$1,753.20
AP Breaker		355	$ 11.55	lb	$4,100.25	$2,023.56	$1,640.10
Non Emulsifier 150		196	$ 69.50	gal	$13,622.00	$6,088.20	$5,448.80
15% HCl		13,000	$ 4.09	gal	$53,170.00	$19,632.00	$21,268.00
30/50 White Sand		177,500	$ 0.36	lb	$63,900.00	$24,624.00	$24,282.00
Nitrogen Product (per 100 scf)		9,179,000	$ 3.00	ea	$275,370.00	$84,082.27	$82,611.00
Description		Quantity	Unit Price	Unit	Total		Discounted Total
Equipment:		Quantity	Unit Price	Unit	Total	Design Discounted Total	Discounted Total
Frac Van		1	$3,600.00	ea	$3,600.00	$1,260.00	$1,260.00
Chem Add/QA		1	$3,000.00	ea	$3,000.00	$1,050.00	$1,050.00
Blender		1	$4,500.00	ea	$4,500.00	$1,575.00	$1,575.00
FR Unit		1	$3,600.00	ea	$3,600.00	$1,260.00	$1,260.00
Iron Truck		1	$2,400.00	ea	$2,400.00	$840.00	$840.00
2500 hp Quintaplex Frac Pump		3	$12,000.00	ea	$36,000.00	$12,600.00	$12,600.00
Sand Master		1	$2,400.00	ea	$2,400.00	$840.00	$840.00
Pneumatic		3	$1,600.00	ea	$4,800.00	$1,680.00	$1,680.00
Frac Valve		1	$1,200.00	ea	$1,200.00	$840.00	$420.00
Frac Head		1	$3,450.00	ea	$3,450.00	$0.00	$1,207.50
Additional Fracturing Stages		11	$22,000.00	ea	$242,000.00	$72,600.00	$77,440.00
N2 Pump Set-up		3	$5,400.00	ea	$16,200.00	$4,860.00	$4,860.00
Pump/Vaporizer (per 100 scf)		8,969,000	$2.50	ea	$224,225.00	$68,551.89	$67,267.50
Transport		17	$0.00	ea	$0.00	$0.00	$0.00
Supervisor		12	$130.00	hrs	$1,560.00	$624.00	$624.00
Heavy Equipment Mileage	150	13	$8.00	ea	$15,600.00	$7,800.00	$7,800.00
Light Equipment Mileage	150	4	$5.00	ea	$3,000.00	$1,500.00	$1,500.00
Materials Mileage	250	20	$8.00	ea	$40,000.00	$20,000.00	$20,000.00
Subtotal:				List Price	$1,114,474.75	$378,337.36	$376,184.90
Sales Tax:		0.00%					$0.00
Total Estimated Cost:		(estimated cost on location, actual invoice may be different)					$376,184.90

Employees attending pre job safety meeting: see safety sheet

Customer Comments:

Gore Nitrogen

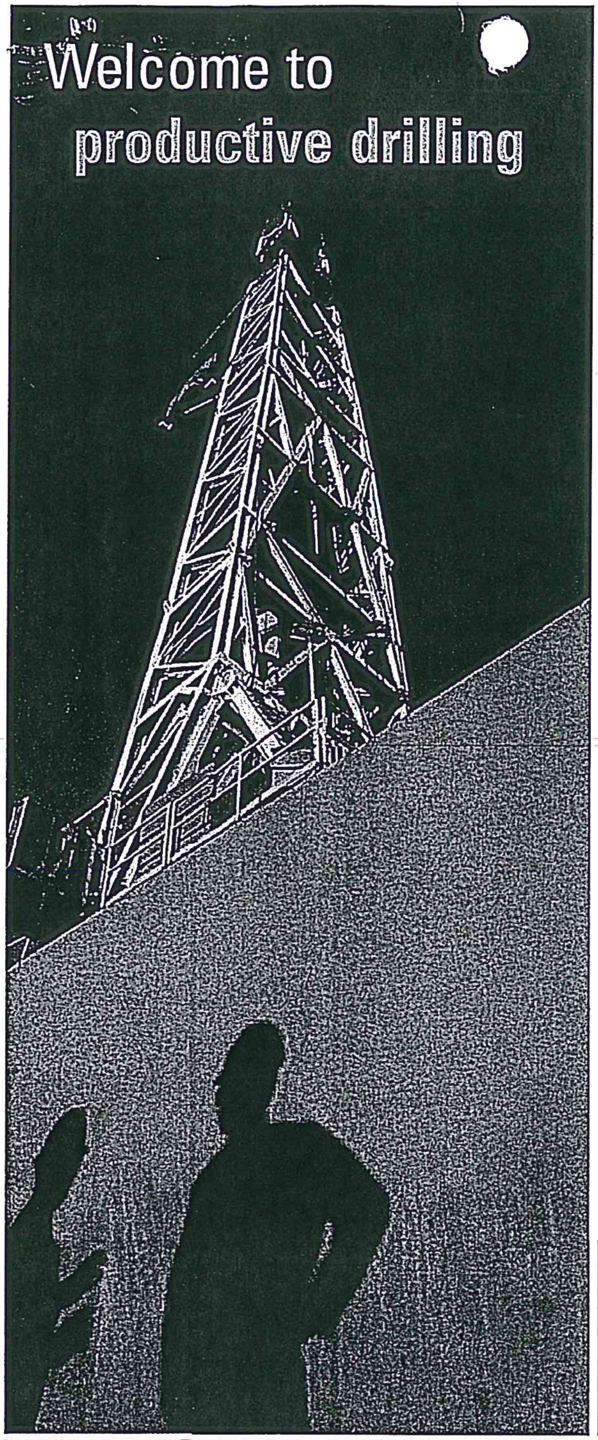
Customer Signature

MAH Haward

Supervisor

JR Graton

Customer Printed Name

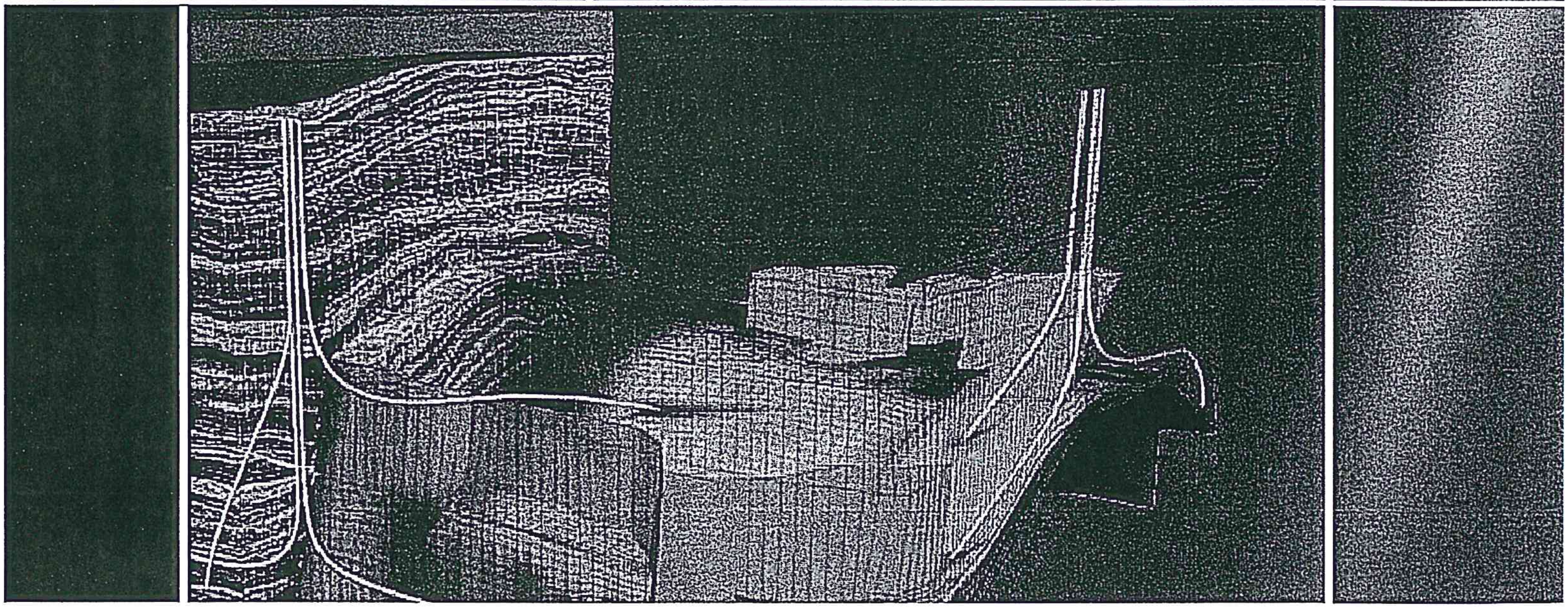


Schlumberger

END OF WELL REPORT

Client - Griffin Management
Rig Name - WWD #14
Well Name - Donna #1H
County - KS, Pratt County
Date - 6/1/2018
Job # - 18OKC0446

Schlumberger



Schlumberger

6/1/2018

Griffin Management

Re: Griffin Management

Well: Donna #1H

Rig: WWD #14

County: KS, Pratt County

Job#: 18OKC0446

Please find enclosed, a copy of the End of Well Report (EOW) provided by our Directional Drilling Services from 05/12/2018 through 05/26/2018 . This report consists of color planned vs. actual well drawings, proposed and actual surveys, morning reports, BHAs, and a Schlumberger office support personnel sheet for the above referenced well.

Should your office require further information, please feel free to contact your sales representative or me.

Sincerely,

Chris Lee
Drilling Engineer

Schlumberger

Section 1

Definitive Plan

Schlumberger

Griffin Management

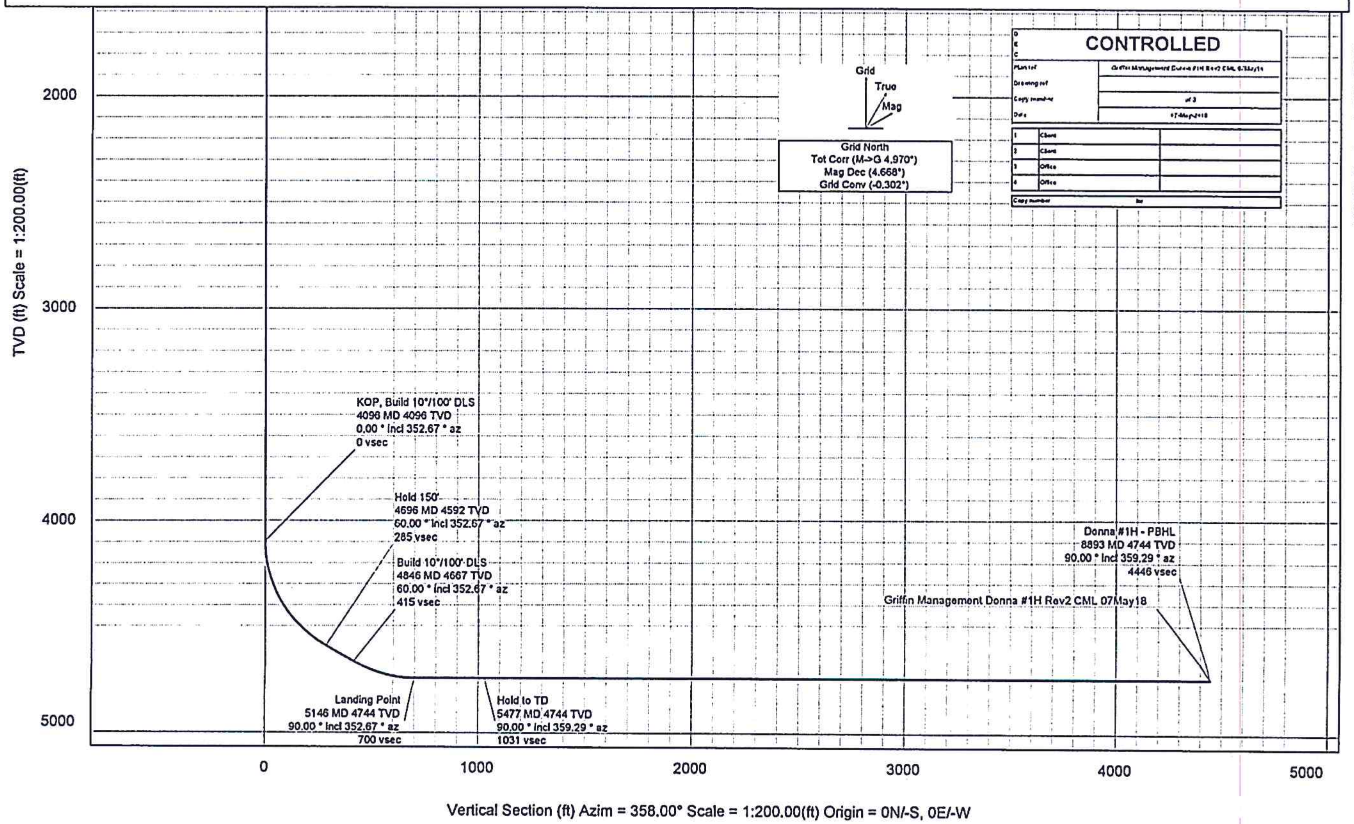
Rev2

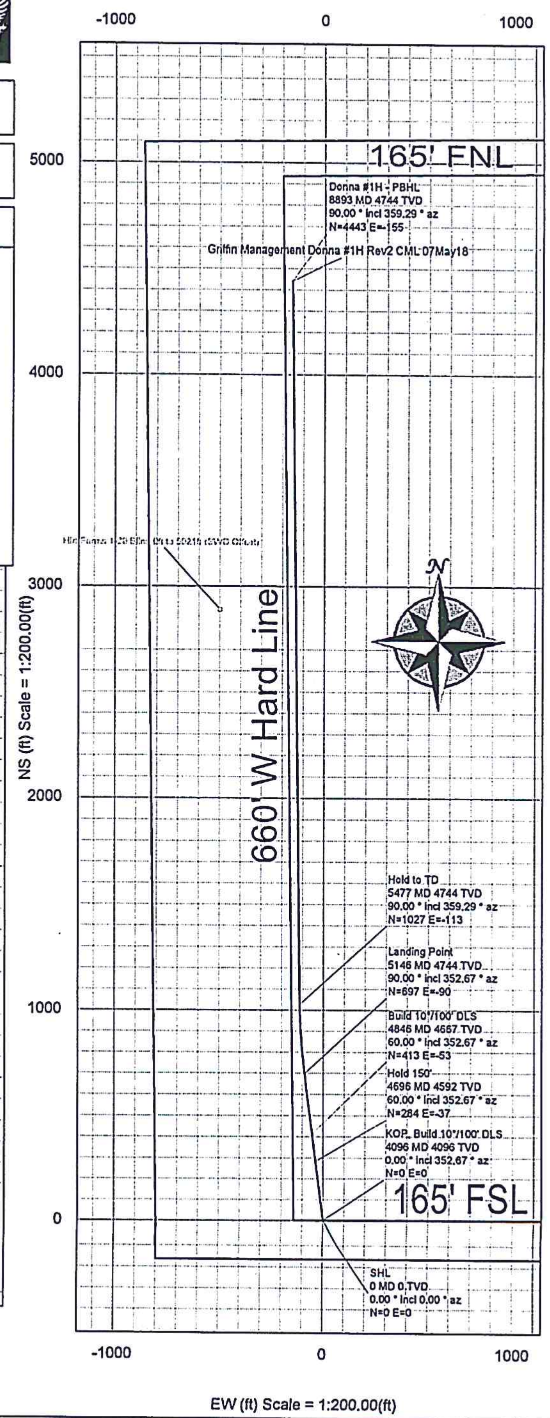
Borehole: Donna #1H	Well: Donna #1H	Field: Pratt County, KS (NAD27, Southern Zone)	Structure: WWD 14

Gravity & Magnetic Parameters				Surface Location	NAD27 Kansas State Plane, Southern Zone, US Feet			Miscellaneous	
Model: HDGM 2018	Dip: 65.341°	Date: 07-May-2018		Lat: N 37 29 7.13	Northing: 298456ftUS	Grid Conv: -0.3018°		Slot: New Slot	TVD Ref: RKB(2041ft above MSL)
MagDec: 4.668°	FS: 51335.031nT	Gravity FS: 999.083mgn (9.80665 Based)		Lon: W 98 59 28.06	Easting: 1857494ftUS	Scale Fact: 0.99996421		Plan: Rev2 CML 07May18	

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP, Build 10°/100' DLS	4096.04	0.00	352.67	4096.04	0.00	0.00	0.00	0.00
Hold 150'	4696.04	60.00	352.67	4592.24	285.24	284.14	-36.55	10.00
Build 10°/100' DLS	4846.04	60.00	352.67	4667.24	414.58	412.98	-53.12	0.00
Landing Point	5146.04	90.00	352.67	4744.00	699.82	697.12	-89.67	10.00
Hold to TD	5477.20	90.00	359.29	4744.00	1030.59	1027.28	-112.87	2.00
Donna #1H - PBHL	8893.35	90.00	359.29	4744.00	4445.87	4443.17	-155.01	0.00





Schlumberger

Griffin Management Donna #1H Rev2 CML 07May18 Proposal Geodetic Report

(Non-Def Plan)

Report Date:	May 07, 2018 - 04:25 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Griffin Management	**Vertical Section Azimuth:**	358.002 ° (Grid North)
Field:	Pratt County, KS (NAD27, Southern Zone)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Griffin Management Donna #1H / New Slot	**TVD Reference Datum:**	RKB
Well:	Donna #1H	**TVD Reference Elevation:**	2041.000 ft above MSL
Borehole:	Donna #1H	**Seabed / Ground Elevation:**	2026.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	4.668 °
Survey Name:	Griffin Management Donna #1H Rev2 CML 07May18	**Total Gravity Field Strength:**	999.0634mgn (9.80665 Based)
Survey Date:	May 07, 2018	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	96.623 ° / 4450.170 ft / 5.906 / 0.938	**Total Magnetic Field Strength:**	51335.031 nT
Coordinate Reference System:	NAD27 Kansas State Plane, Southern Zone, US Feet	**Magnetic Dip Angle:**	65.341 °
Location Lat / Long:	N 37° 29' 7.12722", W 98° 59' 28.05606"	**Declination Date:**	May 07, 2018
Location Grid N/E Y/X:	N 298456.000 ftUS, E 1857494.000 ftUS	**Magnetic Declination Model:**	HDGM 2018
CRS Grid Convergence Angle:	-0.3018 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99996421	**Grid Convergence Used:**	-0.3018 °
Version / Patch:	2.10.715.0	**Total Corr Mag North->Grid North:**	4.9702 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	100.00	0.00	352.67	100.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	200.00	0.00	352.67	200.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	300.00	0.00	352.67	300.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	400.00	0.00	352.67	400.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	500.00	0.00	352.67	500.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	600.00	0.00	352.67	600.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	700.00	0.00	352.67	700.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	800.00	0.00	352.67	800.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	900.00	0.00	352.67	900.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	1000.00	0.00	352.67	1000.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	1100.00	0.00	352.67	1100.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	1200.00	0.00	352.67	1200.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	1300.00	0.00	352.67	1300.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	1400.00	0.00	352.67	1400.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	1500.00	0.00	352.67	1500.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	1600.00	0.00	352.67	1600.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	1700.00	0.00	352.67	1700.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	1800.00	0.00	352.67	1800.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	1900.00	0.00	352.67	1900.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	2000.00	0.00	352.67	2000.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	2100.00	0.00	352.67	2100.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	2200.00	0.00	352.67	2200.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	2300.00	0.00	352.67	2300.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	2400.00	0.00	352.67	2400.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	2500.00	0.00	352.67	2500.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	2600.00	0.00	352.67	2600.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	2700.00	0.00	352.67	2700.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	2800.00	0.00	352.67	2800.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	2900.00	0.00	352.67	2900.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	3000.00	0.00	352.67	3000.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	3100.00	0.00	352.67	3100.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	3200.00	0.00	352.67	3200.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	3300.00	0.00	352.67	3300.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	3400.00	0.00	352.67	3400.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	3500.00	0.00	352.67	3500.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	3600.00	0.00	352.67	3600.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	3700.00	0.00	352.67	3700.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	3800.00	0.00	352.67	3800.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	3900.00	0.00	352.67	3900.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	4000.00	0.00	352.67	4000.00	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
KOP, Build 10°/100' DLS	4096.04	0.00	352.67	4096.04	0.00	0.00	0.00	0.00	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	4100.00	0.40	352.67	4100.00	0.01	0.01	0.00	10.00	298456.01	1857494.00	N 37 29 7.13	W 98 59 28.06
	4200.00	10.40	352.67	4199.43	9.36	9.33	-1.20	10.00	298465.33	1857492.80	N 37 29 7.22	W 98 59 28.07
	4300.00	20.40	352.67	4295.72	35.77	35.63	-4.58	10.00	298491.63	1857489.42	N 37 29 7.48	W 98 59 28.12
	4400.00	30.40	352.67	4385.94	78.41	78.11	-10.05	10.00	298534.11	1857483.95	N 37 29 7.90	W 98 59 28.19
	4500.00	40.40	352.67	4467.35	136.01	135.49	-17.43	10.00	298591.48	1857476.57	N 37 29 8.47	W 98 59 28.28
	4600.00	50.40	352.67	4537.49	206.81	206.01	-26.50	10.00	298662.00	1857467.50	N 37 29 9.16	W 98 59 28.40
Hold 150'	4696.04	60.00	352.67	4592.24	285.24	284.14	-36.55	10.00	298740.13	1857457.45	N 37 29 9.93	W 98 59 28.53
	4700.00	60.00	352.67	4594.22	288.65	287.54	-36.99	0.00	298743.53	1857457.01	N 37 29 9.97	W 98 59 28.53
	4800.00	60.00	352.67	4644.22	374.88	373.43	-48.04	0.00	298829.42	1857445.97	N 37 29 10.82	W 98 59 28.68
Build 10°/100' DLS	4846.04	60.00	352.67	4667.24	414.58	412.98	-53.12	0.00	298868.96	1857440.88	N 37 29 11.21	W 98 59 28.74
	4900.00	65.40	352.67	4691.98	462.30	460.52	-59.24	10.00	298916.50	1857434.76	N 37 29 11.68	W 98 59 28.82
	5000.00	75.40	352.67	4725.49	555.98	553.83	-71.24	10.00	299009.81	1857422.76	N 37 29 12.60	W 98 59 28.98
	5100.00	85.40	352.67	4742.15	654.03	651.50	-83.81	10.00	299107.48	1857410.20	N 37 29 13.56	W 98 59 29.14
Landing Point	5146.04	90.00	352.67	4744.00	699.82	697.12	-89.67	10.00	299153.09	1857404.33	N 37 29 14.01	W 98 59 29.21
	5200.00	90.00	353.75	4744.00	753.59	750.70	-96.05	2.00	299206.67	1857397.95	N 37 29 14.54	W 98 59 29.30
	5300.00	90.00	355.75	4744.00	853.42	850.27	-105.20	2.00	299306.24	1857388.80	N 37 29 15.53	W 98 59 29.42
	5400.00	90.00	357.75	4744.00	953.40	950.11	-110.88	2.00	299406.07	1857383.13	N 37 29 16.51	W 98 59 29.49
Hold to TD	5477.20	90.00	359.29	4744.00	1030.59	1027.28	-112.87	2.00	299483.24	1857381.14	N 37 29 17.28	W 98 59 29.52
	5500.00	90.00	359.29	4744.00	1053.38	1050.08	-113.15	0.00	299506.04	1857380.86	N 37 29 17.50	W 98 59 29.53
	5600.00	90.00	359.29	4744.00	1153.36	1150.07	-114.38	0.00	299606.03	1857379.62	N 37 29 18.49	W 98 59 29.55
	5700.00	90.00	359.29	4744.00	1253.33	1250.06	-115.62	0.00	299706.02	1857378.39	N 37 29 19.48	W 98 59 29.57
	5800.00	90.00	359.29	4744.00	1353.31	1350.06	-116.85	0.00	299806.00	1857377.16	N 37 29 20.47	W 98 59 29.59
	5900.00	90.00	359.29	4744.00	1453.28	1450.05	-118.08	0.00	299905.99	1857375.92	N 37 29 21.46	W 98 59 29.62
	6000.00	90.00	359.29	4744.00	1553.26	1550.04	-119.32	0.00	300005.98	1857374.69	N 37 29 22.45	W 98 59 29.64
	6100.00	90.00	359.29	4744.00	1653.23	1650.03	-120.55	0.00	300105.97	1857373.45	N 37 29 23.43	W 98 59 29.66
	6200.00	90.00	359.29	4744.00	1753.21	1750.02	-121.78	0.00	300205.96	1857372.22	N 37 29 24.42	W 98 59 29.68
	6300.00	90.00	359.29	4744.00	1853.18	1850.02	-123.02	0.00	300305.95	1857370.99	N 37 29 25.41	W 98 59 29.70
	6400.00	90.00	359.29	4744.00	1953.16	1950.01	-124.25	0.00	300405.94	1857369.75	N 37 29 26.40	W 98 59 29.73
	6500.00	90.00	359.29	4744.00	2053.13	2050.00	-125.48	0.00	300505.92	1857368.52	N 37 29 27.39	W 98 59 29.75
	6600.00	90.00	359.29	4744.00	2153.11	2149.99	-126.72	0.00	300605.91	1857367.29	N 37 29 28.38	W 98 59 29.77
	6700.00	90.00	359.29	4744.00	2253.08	2249.99	-127.95	0.00	300705.90	1857366.05	N 37 29 29.37	W 98 59 29.79
	6800.00	90.00	359.29	4744.00	2353.05	2349.98	-129.18	0.00	300805.89	1857364.82	N 37 29 30.35	W 98 59 29.81
	6900.00	90.00	359.29	4744.00	2453.03	2449.97	-130.42	0.00	300905.88	1857363.59	N 37 29 31.34	W 98 59 29.83
	7000.00	90.00	359.29	4744.00	2553.00	2549.96	-131.65	0.00	301005.87	1857362.35	N 37 29 32.33	W 98 59 29.86
	7100.00	90.00	359.29	4744.00	2652.98	2649.96	-132.88	0.00	301105.86	1857361.12	N 37 29 33.32	W 98 59 29.88
	7200.00	90.00	359.29	4744.00	2752.95	2749.95	-134.12	0.00	301205.84	1857359.89	N 37 29 34.31	W 98 59 29.90
	7300.00	90.00	359.29	4744.00	2852.93	2849.94	-135.35	0.00	301305.83	1857358.65	N 37 29 35.30	W 98 59 29.92
	7400.00	90.00	359.29	4744.00	2952.90	2949.93	-136.59	0.00	301405.82	1857357.42	N 37 29 36.29	W 98 59 29.94
	7500.00	90.00	359.29	4744.00	3052.88	3049.93	-137.82	0.00	301505.81	1857356.19	N 37 29 37.27	W 98 59 29.97
	7600.00	90.00	359.29	4744.00	3152.85	3149.92	-139.05	0.00	301605.80	1857354.95	N 37 29 38.26	W 98 59 29.99
	7700.00	90.00	359.29	4744.00	3252.83	3249.91	-140.29	0.00	301705.79	1857353.72	N 37 29 39.25	W 98 59 30.01

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	7800.00	90.00	359.29	4744.00	3352.80	3349.90	-141.52	0.00	301805.78	1857352.49	N 37 29 40.24	W 98 59 30.03
	7900.00	90.00	359.29	4744.00	3452.77	3449.90	-142.75	0.00	301905.76	1857351.25	N 37 29 41.23	W 98 59 30.05
	8000.00	90.00	359.29	4744.00	3552.75	3549.89	-143.99	0.00	302005.75	1857350.02	N 37 29 42.22	W 98 59 30.07
	8100.00	90.00	359.29	4744.00	3652.72	3649.88	-145.22	0.00	302105.74	1857348.79	N 37 29 43.20	W 98 59 30.10
	8200.00	90.00	359.29	4744.00	3752.70	3749.87	-146.45	0.00	302205.73	1857347.55	N 37 29 44.19	W 98 59 30.12
	8300.00	90.00	359.29	4744.00	3852.67	3849.86	-147.69	0.00	302305.72	1857346.32	N 37 29 45.18	W 98 59 30.14
	8400.00	90.00	359.29	4744.00	3952.65	3949.86	-148.92	0.00	302405.71	1857345.09	N 37 29 46.17	W 98 59 30.16
	8500.00	90.00	359.29	4744.00	4052.62	4049.85	-150.15	0.00	302505.70	1857343.85	N 37 29 47.16	W 98 59 30.18
	8600.00	90.00	359.29	4744.00	4152.60	4149.84	-151.39	0.00	302605.69	1857342.62	N 37 29 48.15	W 98 59 30.21
	8700.00	90.00	359.29	4744.00	4252.57	4249.83	-152.62	0.00	302705.67	1857341.38	N 37 29 49.14	W 98 59 30.23
	8800.00	90.00	359.29	4744.00	4352.55	4349.83	-153.85	0.00	302805.66	1857340.15	N 37 29 50.12	W 98 59 30.25
Donna #1H - PBHL	8893.35	90.00	359.29	4744.00	4445.87	4443.17	-155.01	0.00	302899.00	1857339.00	N 37 29 51.05	W 98 59 30.27

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
Surface Hole - Non SLB	1	0.000	15.000	1/100.000	12.250	9.625		NAL_VERTICAL_GAP-Depth Only	Donna #1H / Griffin Management Donna #1H Rev2 CML 07May18
Surface Hole - Non SLB	1	15.000	350.000	1/100.000	12.250	9.625		NAL_VERTICAL_GAP	Donna #1H / Griffin Management Donna #1H Rev2 CML 07May18
Vertical - Non-SLB	1	350.000	4100.000	1/100.000	8.750	7.000		NAL_VERTICAL_GAP	Donna #1H / Griffin Management Donna #1H Rev2 CML 07May18
8.75in Curve - HDGM Survey Correction	1	4100.000	5146.000	1/100.000	8.750	7.000		NAL_MWD_PLUS_0.5_DEG	Donna #1H / Griffin Management Donna #1H Rev2 CML 07May18
6.125in Lateral - HDGM Survey Corrections	1	5146.000	8893.348	1/100.000	6.125	4.500		NAL_MWD_PLUS_0.5_DEG	Donna #1H / Griffin Management Donna #1H Rev2 CML 07May18

Schlumberger

Section 2

Plan vs Actual

Schlumberger

Griffin Management

Final PVA - Rev2

Borehole:	Well:	Field:	Structure:
Donna #1H	Donna #1H	Pratt County, KS (NAD27, Southern Zone)	WWD #14

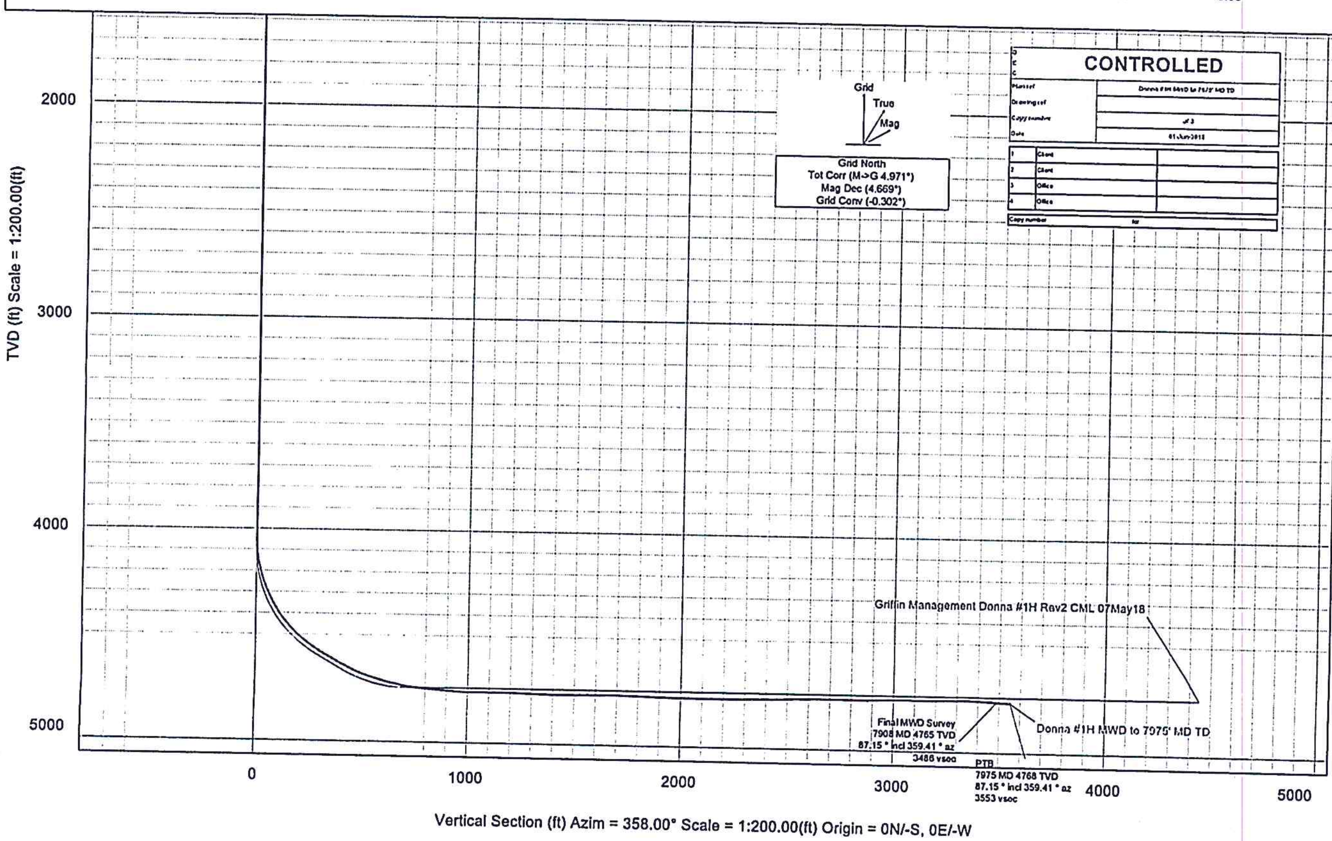
Gravity & Magnetic Parameters — Model: HDGM 2018; Dip: 65.341°; Date: 04-May-2018; MagDec: 4.669°; FS: 51336.032nT; Gravity FS: 999.063mgn (9.80665 Based)

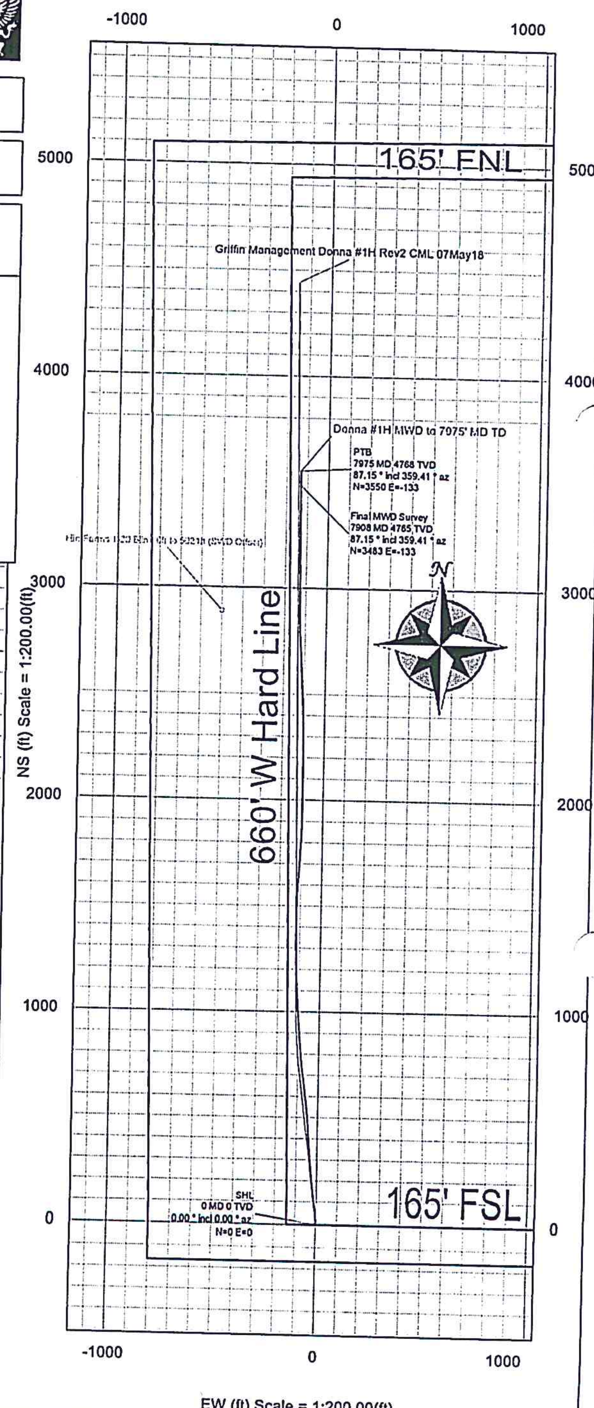
Surface Location — NAD27 Kansas State Plane, Southern Zone, US Feet; Lat: N 37 29 7.13; Lon: W 98 59 28.06; Northing: 298456ftUS; Easting: 1857494ftUS; Grid Conv: -0.3018°; Scale Fact: 0.99996421

Miscellaneous — Slot: New Slot; TVD Ref: RKB(2041ft above MSL); Plan: Donna #1H MWD to 7975' MD TD

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Final MWD Survey	7908.00	87.15	359.41	4764.85	3485.77	3483.27	-132.51	2.90
PTB	7975.00	87.15	359.41	4768.19	3552.66	3550.18	-133.20	0.00





Schlumberger

Donna #1H MWD to 7975' MD TD Survey Geodetic Report

(Def Survey)

Report Date:	June 01, 2018 - 11:12 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Griffin Management	**Vertical Section Azimuth:**	358.002 ° (Grid North)
Field:	Pratt County, KS (NAD27, Southern Zone)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Griffin Management Donna #1H / New Slot	**TVD Reference Datum:**	RKB
Well:	Donna #1H	**TVD Reference Elevation:**	2041.000 ft above MSL
Borehole:	Donna #1H	**Seabed / Ground Elevation:**	2026.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	4.669 °
Survey Name:	Donna #1H MWD to 7975' MD TD	**Total Gravity Field Strength:**	999.0634mgn (9.80665 Based)
Survey Date:	May 04, 2018	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	163.004 ° / 3577.089 ft / 5.989 / 0.750	**Total Magnetic Field Strength:**	51336.032 nT
Coordinate Reference System:	NAD27 Kansas State Plane, Southern Zone, US Feet	**Magnetic Dip Angle:**	65.341 °
Location Lat / Long:	N 37° 29' 7.12722", W 98° 59' 28.05606"	**Declination Date:**	May 04, 2018
Location Grid N/E Y/X:	N 298456.000 ftUS, E 1857494.000 ftUS	**Magnetic Declination Model:**	HDGM 2018
CRS Grid Convergence Angle:	-0.3018 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99996421	**Grid Convergence Used:**	-0.3018 °
Version / Patch:	2.10.706.0	**Total Corr Mag North->Grid North:**	4.9709 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	298456.00	1857494.00	N 37 29 7.13	W 98 59 28.06
	1064.00	0.41	274.91	1063.99	0.46	0.33	-3.79	0.04	298456.33	1857490.21	N 37 29 7.13	W 98 59 28.10
	1989.00	0.18	251.77	1988.98	0.45	0.15	-8.47	0.03	298456.15	1857485.53	N 37 29 7.13	W 98 59 28.16
	2976.00	0.33	43.21	2975.97	2.02	1.74	-8.00	0.05	298457.74	1857486.00	N 37 29 7.14	W 98 59 28.16
	3966.00	0.78	112.02	3965.93	1.28	1.29	0.20	0.07	298457.29	1857494.20	N 37 29 7.14	W 98 59 28.05
	3987.00	0.51	114.57	3986.93	1.18	1.20	0.42	1.29	298457.20	1857494.42	N 37 29 7.14	W 98 59 28.05
	4019.00	0.58	114.23	4018.93	1.05	1.07	0.70	0.22	298457.07	1857494.70	N 37 29 7.14	W 98 59 28.05
	4050.00	0.60	49.09	4049.93	1.08	1.12	0.96	2.05	298457.12	1857494.96	N 37 29 7.14	W 98 59 28.04
	4082.00	2.98	354.44	4081.91	2.02	2.05	1.01	8.37	298458.05	1857495.01	N 37 29 7.15	W 98 59 28.04
	4113.00	6.34	354.50	4112.81	4.53	4.56	0.77	10.84	298460.56	1857494.77	N 37 29 7.17	W 98 59 28.05
	4145.00	9.57	354.65	4144.49	8.95	8.97	0.35	10.09	298464.97	1857494.35	N 37 29 7.22	W 98 59 28.05
	4177.00	12.51	352.89	4175.90	15.06	15.06	-0.33	9.25	298471.06	1857493.67	N 37 29 7.28	W 98 59 28.06
	4209.00	15.18	351.04	4206.97	22.67	22.64	-1.41	8.46	298478.64	1857492.59	N 37 29 7.35	W 98 59 28.08
	4240.00	18.20	352.56	4236.66	31.52	31.45	-2.67	9.84	298487.45	1857491.33	N 37 29 7.44	W 98 59 28.09
	4272.00	21.44	354.29	4266.76	42.34	42.23	-3.90	10.29	298498.22	1857490.10	N 37 29 7.54	W 98 59 28.11
	4303.00	24.14	351.13	4295.34	54.29	54.13	-5.44	9.56	298510.13	1857488.56	N 37 29 7.66	W 98 59 28.13
	4335.00	26.55	351.18	4324.25	67.89	67.66	-7.55	7.53	298523.66	1857486.45	N 37 29 7.80	W 98 59 28.15
	4366.00	29.20	351.78	4351.65	82.28	82.00	-9.69	8.60	298537.99	1857484.31	N 37 29 7.94	W 98 59 28.18
	4398.00	31.92	349.52	4379.21	98.42	98.04	-12.34	9.23	298554.04	1857481.66	N 37 29 8.10	W 98 59 28.22
	4430.00	35.01	352.14	4405.90	115.92	115.46	-15.14	10.66	298571.46	1857478.86	N 37 29 8.27	W 98 59 28.25
	4461.00	38.03	353.07	4430.81	134.28	133.75	-17.51	9.90	298589.75	1857476.49	N 37 29 8.45	W 98 59 28.28
	4493.00	41.23	353.45	4455.45	154.62	154.02	-19.90	10.03	298610.02	1857474.10	N 37 29 8.65	W 98 59 28.31
	4525.00	44.39	353.75	4478.93	176.30	175.63	-22.32	9.90	298631.62	1857471.68	N 37 29 8.86	W 98 59 28.34
	4556.00	47.28	352.58	4500.52	198.46	197.71	-24.98	9.71	298653.70	1857469.03	N 37 29 9.08	W 98 59 28.38
	4588.00	50.12	355.12	4521.64	222.43	221.60	-27.54	10.69	298677.59	1857466.46	N 37 29 9.32	W 98 59 28.41
	4620.00	52.93	355.50	4541.55	247.45	246.57	-29.59	8.83	298702.56	1857464.42	N 37 29 9.56	W 98 59 28.44
	4651.00	56.11	354.42	4559.54	272.65	271.71	-31.81	10.64	298727.70	1857462.19	N 37 29 9.81	W 98 59 28.47
	4683.00	59.29	355.64	4576.64	299.66	298.65	-34.15	10.45	298754.64	1857459.86	N 37 29 10.08	W 98 59 28.50
	4715.00	60.34	354.71	4592.73	327.29	326.22	-36.47	4.13	298782.20	1857457.53	N 37 29 10.35	W 98 59 28.53
	4747.00	61.03	355.19	4608.40	355.15	354.01	-38.93	2.52	298810.00	1857455.07	N 37 29 10.63	W 98 59 28.56
	4778.00	61.35	356.06	4623.33	382.29	381.09	-41.00	2.67	298837.08	1857453.00	N 37 29 10.89	W 98 59 28.59
	4810.00	62.12	356.94	4638.49	410.46	409.22	-42.72	3.41	298865.21	1857451.28	N 37 29 11.17	W 98 59 28.61
	4842.00	62.84	357.20	4653.27	438.84	437.57	-44.17	2.36	298893.55	1857449.83	N 37 29 11.45	W 98 59 28.63
	4874.00	65.57	354.60	4667.20	467.63	466.30	-46.24	11.24	298922.28	1857447.76	N 37 29 11.73	W 98 59 28.66
	4905.00	68.10	354.56	4679.39	496.07	494.67	-48.93	8.16	298950.65	1857445.07	N 37 29 12.02	W 98 59 28.70
	4937.00	70.66	352.08	4690.66	525.92	524.41	-52.42	10.80	298980.39	1857441.58	N 37 29 12.31	W 98 59 28.74
	4969.00	72.14	352.73	4700.87	556.10	554.47	-56.43	5.01	299010.45	1857437.58	N 37 29 12.61	W 98 59 28.79
	5000.00	74.13	352.54	4709.86	585.63	583.89	-60.23	6.45	299039.87	1857433.77	N 37 29 12.90	W 98 59 28.84
	5032.00	75.97	353.46	4718.12	616.43	614.57	-64.00	6.39	299070.55	1857430.01	N 37 29 13.20	W 98 59 28.89
	5064.00	77.71	352.62	4725.40	647.47	645.50	-67.77	6.01	299101.48	1857426.23	N 37 29 13.51	W 98 59 28.94
	5096.00	79.36	352.88	4731.76	678.70	676.61	-71.73	5.22	299132.59	1857422.27	N 37 29 13.81	W 98 59 28.99
	5127.00	81.17	352.24	4737.01	709.12	706.91	-75.69	6.18	299162.88	1857418.32	N 37 29 14.11	W 98 59 29.04
	5160.00	82.42	351.31	4741.72	741.59	739.23	-80.36	4.70	299195.21	1857413.64	N 37 29 14.43	W 98 59 29.10
	5191.00	83.89	354.17	4745.41	772.23	769.76	-84.25	10.31	299225.73	1857409.76	N 37 29 14.73	W 98 59 29.15
	5223.00	84.95	355.72	4748.52	804.03	801.48	-87.05	5.85	299257.45	1857406.95	N 37 29 15.05	W 98 59 29.19
	5255.00	86.07	355.29	4751.03	835.90	833.29	-89.55	3.75	299289.26	1857404.45	N 37 29 15.36	W 98 59 29.22
	5287.00	85.85	353.87	4753.28	867.77	865.06	-92.57	4.48	299321.03	1857401.44	N 37 29 15.68	W 98 59 29.26
	5319.00	86.02	356.19	4755.55	899.64	896.86	-95.33	7.25	299352.83	1857398.67	N 37 29 15.99	W 98 59 29.30
	5349.00	86.47	356.15	4757.52	929.56	926.73	-97.33	1.51	299382.70	1857396.67	N 37 29 16.28	W 98 59 29.32
	5434.00	89.55	355.89	4760.47	1014.45	1011.46	-103.23	3.64	299467.43	1857390.78	N 37 29 17.12	W 98 59 29.40
	5466.00	90.00	355.98	4760.59	1046.43	1043.38	-105.50	1.43	299499.34	1857388.51	N 37 29 17.44	W 98 59 29.43
	5498.00	90.73	356.01	4760.39	1078.41	1075.30	-107.73	2.28	299531.26	1857386.27	N 37 29 17.75	W 98 59 29.46
	5530.00	90.00	356.91	4760.18	1110.39	1107.24	-109.71	3.62	299563.20	1857384.30	N 37 29 18.07	W 98 59 29.49
	5562.00	90.00	357.09	4760.18	1142.39	1139.20	-111.38	0.56	299595.16	1857382.62	N 37 29 18.38	W 98 59 29.51
	5594.00	88.94	358.16	4760.48	1174.39	1171.17	-112.71	4.71	299627.12	1857381.30	N 37 29 18.70	W 98 59 29.53
	5626.00	89.22	357.87	4760.99	1206.38	1203.14	-113.82	1.26	299659.10	1857380.19	N 37 29 19.02	W 98 59 29.55
	5658.00	88.77	358.43	4761.56	1238.38	1235.12	-114.85	2.24	299691.08	1857379.16	N 37 29 19.33	W 98 59 29.56
	5690.00	88.60	358.74	4762.29	1270.37	1267.10	-115.64	1.10	299723.06	1857378.37	N 37 29 19.65	W 98 59 29.57
	5722.00	88.21	358.88	4763.18	1302.35	1299.09	-116.30	1.29	299755.04	1857377.70	N 37 29 19.96	W 98 59 29.58
	5754.00	88.04	359.17	4764.23	1334.33	1331.06	-116.85	1.05	299787.01	1857377.16	N 37 29 20.28	W 98 59 29.59
	5786.00	88.43	359.90	4765.21	1366.30	1363.05	-117.11	2.59	299819.00	1857376.90	N 37 29 20.60	W 98 59 29.60
	5817.00	88.88	359.90	4765.94	1397.28	1394.04	-117.16	1.45	299849.99	1857376.84	N 37 29 20.90	W 98 59 29.60
	5849.00	89.33	0.34	4766.44	1429.25	1426.03	-117.09	1.97	299881.98	1857376.91	N 37 29 21.22	W 98 59 29.60
	5881.00	89.94	0.83	4766.64	1461.22	1458.03	-116.77	2.45	299913.98	1857377.24	N 37 29 21.54	W 98 59 29.60
	5913.00	90.62	0.56	4766.49	1493.18	1490.03	-116.38	2.29	299945.97	1857377.63	N 37 29 21.85	W 98 59 29.60
	5945.00	91.34	0.75	4765.94	1525.14	1522.02	-116.01	2.33	299977.96	1857377.99	N 37 29 22.17	W 98 59 29.59
	5977.00	91.79	1.90	4765.07	1557.07	1554.00	-115.27	3.86	300009.94	1857378.73	N 37 29 22.49	W 98 59 29.59
	6009.00	91.12	2.73	4764.25	1588.97	1585.96	-113.98	3.33	300041.90	1857380.02	N 37 29 22.80	W 98 59 29.57
	6041.00	90.11	3.88	4763.91	1620.83	1617.91	-112.14	4.78	300073.85	1857381.87	N 37 29 23.12	W 98 59 29.55
	6073.00	89.83	3.21	4763.93	1652.68	1649.85	-110.16	2.27	300105.78	1857383.85	N 37 29 23.43	W 98 59 29.53
	6105.00	89.83	3.73	4764.02	1684.54	1681.79	-108.22	1.62	300137.72	1857385.78	N 37 29 23.75	W 98 59 29.51
	6137.00	88.94	3.47	4764.37	1716.38	1713.72	-106.21	2.90	300169.66	1857387.79	N 37 29 24.06	W 98 59 29.49
	6169.00	88.60	3.10	4765.05	1748.24	1745.66	-104.38	1.57	300201.60	1857389.62	N 37 29 24.38	W 98 59 29.47
	6201.00	88.71	2.77	4765.80	1780.11	1777.61	-102.74	1.09	300233.54	1857391.26	N 37 29 24.70	W 98 59 29.45
	6232.00	88.60	2.76	4766.53	1811.00	1808.57	-101.25	0.36	300264.50	1857392.76	N 37 29 25.00	W 98 59 29.43
	6264.00	87.87	2.19	4767.52	1842.88	1840.52	-99.86	2.89	300296.45	1857394.14	N 37 29 25.32	W 98 59 29.42
	6296.00	88.21	1.75	4768.61	1874.79	1872.48	-98.77	1.74	300328.41	1857395.24	N 37 29 25.63	W 98 59 29.40
	6328.00	88.38	0.52	4769.56	1906.73	1904.46	-98.13	3.88	300360.39	1857395.87	N 37 29 25.95	W 98 59 29.40
	6359.00	88.38	1.12	4770.44	1937.68	1935.45	-97.69	1.93	300391.37	1857396.32	N 37 29 26.26	W 98 59 29.39

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	6391.00	88.60	0.55	4771.28	1969.63	1967.43	-97.22	1.91	300423.36	1857396.78	N 37 29 26.57	W 98 59 29.39
	6423.00	89.27	359.61	4771.88	2001.60	1999.43	-97.18	3.61	300455.35	1857396.83	N 37 29 26.89	W 98 59 29.39
	6454.00	89.66	359.71	4772.17	2032.58	2030.42	-97.36	1.30	300486.35	1857396.64	N 37 29 27.20	W 98 59 29.40
	6486.00	89.78	359.72	4772.32	2064.57	2062.42	-97.52	0.38	300518.35	1857396.48	N 37 29 27.51	W 98 59 29.40
	6518.00	89.83	359.91	4772.43	2096.55	2094.42	-97.62	0.61	300550.34	1857396.38	N 37 29 27.83	W 98 59 29.40
	6549.00	90.06	0.05	4772.46	2127.53	2125.42	-97.63	0.87	300581.34	1857396.37	N 37 29 28.14	W 98 59 29.41
	6581.00	90.17	358.94	4772.40	2159.52	2157.42	-97.92	3.49	300613.34	1857396.09	N 37 29 28.45	W 98 59 29.41
	6613.00	89.78	358.85	4772.41	2191.52	2189.41	-98.53	1.25	300645.33	1857395.47	N 37 29 28.77	W 98 59 29.42
	6645.00	90.06	359.42	4772.46	2223.51	2221.41	-99.02	1.98	300677.33	1857394.99	N 37 29 29.08	W 98 59 29.43
	6676.00	90.67	359.11	4772.26	2254.50	2252.41	-99.41	2.21	300708.32	1857394.59	N 37 29 29.39	W 98 59 29.44
	6708.00	91.45	359.48	4771.67	2286.49	2284.40	-99.81	2.70	300740.31	1857394.20	N 37 29 29.71	W 98 59 29.44
	6739.00	91.68	358.94	4770.82	2317.47	2315.38	-100.24	1.89	300771.30	1857393.77	N 37 29 30.01	W 98 59 29.45
	6771.00	91.68	359.26	4769.88	2349.45	2347.37	-100.74	1.00	300803.28	1857393.27	N 37 29 30.33	W 98 59 29.46
	6802.00	90.50	358.28	4769.29	2380.44	2378.35	-101.40	4.95	300834.26	1857392.60	N 37 29 30.64	W 98 59 29.47
	6834.00	89.94	357.61	4769.17	2412.44	2410.33	-102.55	2.73	300866.24	1857391.45	N 37 29 30.95	W 98 59 29.49
	6866.00	90.89	357.36	4768.94	2444.44	2442.30	-103.95	3.07	300898.21	1857390.05	N 37 29 31.27	W 98 59 29.51
	6898.00	91.56	356.95	4768.25	2476.43	2474.25	-105.54	2.45	300930.16	1857388.46	N 37 29 31.58	W 98 59 29.53
	6929.00	92.52	356.55	4767.15	2507.40	2505.18	-107.30	3.35	300961.09	1857386.70	N 37 29 31.89	W 98 59 29.55
	6961.00	92.07	356.88	4765.87	2539.37	2537.11	-109.13	1.74	300993.01	1857384.87	N 37 29 32.21	W 98 59 29.58
	6993.00	91.12	357.09	4764.98	2571.35	2569.05	-110.81	3.04	301024.95	1857383.19	N 37 29 32.52	W 98 59 29.60
	7025.00	91.29	356.97	4764.31	2603.34	2601.00	-112.47	0.65	301056.90	1857381.53	N 37 29 32.84	W 98 59 29.62
	7057.00	90.56	356.76	4763.79	2635.33	2632.95	-114.22	2.37	301088.85	1857379.78	N 37 29 33.15	W 98 59 29.65
	7088.00	89.44	356.10	4763.79	2666.31	2663.88	-116.15	4.19	301119.78	1857377.85	N 37 29 33.46	W 98 59 29.67
	7120.00	89.10	356.02	4764.20	2698.29	2695.81	-118.35	1.09	301151.70	1857375.65	N 37 29 33.77	W 98 59 29.70
	7183.00	90.00	356.13	4764.69	2761.26	2758.66	-122.66	1.44	301214.55	1857371.34	N 37 29 34.39	W 98 59 29.76
	7243.00	89.72	358.48	4764.84	2821.25	2818.59	-125.48	3.94	301274.48	1857368.52	N 37 29 34.99	W 98 59 29.80
	7307.00	91.34	359.86	4764.25	2885.23	2882.57	-126.41	3.33	301338.46	1857367.59	N 37 29 35.62	W 98 59 29.81
	7371.00	92.63	359.63	4762.03	2949.16	2946.53	-126.69	2.05	301402.42	1857367.31	N 37 29 36.25	W 98 59 29.82
	7434.00	90.22	359.46	4760.46	3012.11	3009.51	-127.20	3.83	301465.39	1857366.81	N 37 29 36.87	W 98 59 29.83
	7497.00	88.32	359.10	4761.27	3075.09	3072.49	-127.99	3.07	301528.38	1857366.02	N 37 29 37.50	W 98 59 29.84
	7560.00	90.62	359.04	4761.85	3138.07	3135.48	-129.01	3.65	301591.36	1857365.00	N 37 29 38.12	W 98 59 29.86
	7624.00	91.73	359.14	4760.54	3202.04	3199.45	-130.03	1.74	301655.33	1857363.98	N 37 29 38.75	W 98 59 29.88
	7688.00	91.18	359.21	4758.91	3266.01	3263.43	-130.95	0.87	301719.30	1857363.06	N 37 29 39.38	W 98 59 29.89
	7751.00	89.39	359.78	4758.60	3328.98	3326.42	-131.50	2.98	301782.30	1857362.50	N 37 29 40.01	W 98 59 29.91
	7814.00	88.38	359.71	4759.82	3391.94	3389.41	-131.78	1.61	301845.28	1857362.22	N 37 29 40.63	W 98 59 29.91
	7846.00	86.76	359.69	4761.18	3423.90	3421.38	-131.95	5.06	301877.25	1857362.06	N 37 29 40.95	W 98 59 29.92
	7877.00	86.25	359.41	4763.07	3454.83	3452.32	-132.19	1.88	301908.19	1857361.81	N 37 29 41.25	W 98 59 29.92
Final MWD Survey	7908.00	87.15	359.41	4764.85	3485.77	3483.27	-132.51	2.90	301939.13	1857361.49	N 37 29 41.56	W 98 59 29.93
PTB	7975.00	87.15	359.41	4768.19	3552.66	3550.18	-133.20	0.00	302006.05	1857360.80	N 37 29 42.22	W 98 59 29.94

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	15.000	Act Stns	12.250	9.625	NAL_MWD_2.0_DEG-Depth Only	Donna #1H / Donna #1H MWD to 7975' MD TD
	1	15.000	366.000	1/98.425	12.250	9.625	NAL_MWD_2.0_DEG	Donna #1H / Donna #1H MWD to 7975' MD TD
	1	366.000	366.000	Act Stns	12.250	9.625	NAL_MWD_2.0_DEG	Donna #1H / Donna #1H MWD to 7975' MD TD
	1	366.000	1064.000	1/98.425	8.750	4.500	NAL_MWD_2.0_DEG	Donna #1H / Donna #1H MWD to 7975' MD TD
	1	1064.000	1064.000	Act Stns	8.750	4.500	NAL_MWD_2.0_DEG	Donna #1H / Donna #1H MWD to 7975' MD TD
	1	1064.000	1989.000	1/98.425	8.750	4.500	NAL_MWD_2.0_DEG	Donna #1H / Donna #1H MWD to 7975' MD TD
	1	1989.000	1989.000	Act Stns	8.750	4.500	NAL_MWD_2.0_DEG	Donna #1H / Donna #1H MWD to 7975' MD TD
	1	1989.000	2976.000	1/98.425	8.750	4.500	NAL_MWD_2.0_DEG	Donna #1H / Donna #1H MWD to 7975' MD TD
	1	2976.000	2976.000	Act Stns	8.750	4.500	NAL_MWD_2.0_DEG	Donna #1H / Donna #1H MWD to 7975' MD TD
	1	2976.000	3966.000	1/98.425	8.750	4.500	NAL_MWD_2.0_DEG	Donna #1H / Donna #1H MWD to 7975' MD TD
	1	3966.000	5146.000	Act Stns	8.750	4.500	NAL_MWD_2.0_DEG	Donna #1H / Donna #1H MWD to 7975' MD TD
	1	5146.000	7975.000	Act Stns	6.125	4.500	NAL_MWD_2.0_DEG	Donna #1H / Donna #1H MWD to 7975' MD TD

TERRATECH
ENERGY SERVICE, LLC
Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: DONNA 1-H
API: 15-151-22470
Location: (29) of 29N 15W
License Number: 33936
Spud Date: 5/08/2018
Surface Coordinates: 37.485313
-98.991127
Bottom Hole Coordinates: 37.497513
-98.991741
Ground Elevation (ft): 2026
Logged Interval (ft): 4062 To: 7975
Formation: Viola
Type of Drilling Fluid: Formation Water

Region: Pratt County
Drilling Completed: 05/26/2018

K.B. Elevation (ft): 2041
Total Depth (ft): 7975

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

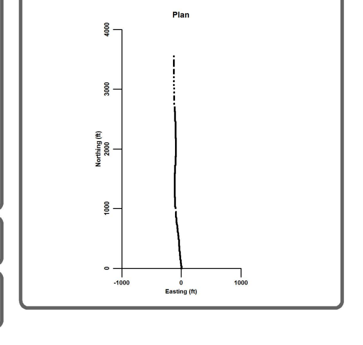
OPERATOR

Company: Charles N. Griffin
Address: P.O. BOX 347
PRATT, KS 67124-0347

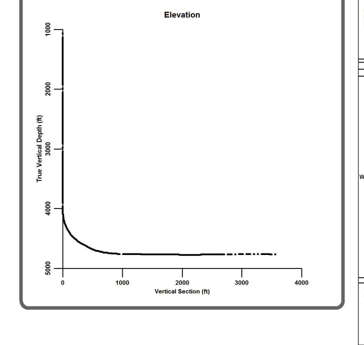
GEOLOGIST

Name: Felts & Reed
Company: Terra Tech Energy Service, LLC
Address: 1632 S. West Street - Suite 12
Wichita, KS 67213

Plan



Elevation



TERRATECH
ENERGY SERVICE, LLC

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

Well Name: Donna 1H
API: 15-151-22470-0100
Location: SW SE SW SW of Section (29) 29s 15w
License Number: 33936 | Region: Kansas
Spud Date: 5/8/2017 | Drilling Completed: 5/13/2018
Surface Coordinates: Latitude: 37.85313
Longitude: -98.991127
Bottom Hole Coordinates: Same as surface coordinates: Seperate Log From KOP
Ground Elevation (ft): 2021 | K.B. Elevation (ft): 2041
Logged Interval (ft): 3500 To: 4062 | Total Depth (ft): 4062
Formation: Basal Douglas Shale @ KOP
Type of Drilling Fluid: Chemical Drispac (Mud-Co.)

OPERATOR

Company: Charles N. Griffin
Address: P.O. Box 347
Pratt, KS 67124-037

GEOLOGIST

Name: Bruce A. Reed/Eli J. Felts
Company: TerraTech Energy Service, LLC.
Address: 1632 S. West Suite #12
Wichita, KS 67203
(316) 617-3959 - Bruce Mobile

Remarks

After reaching a depth of 4062' TVD. The string of drill pipe was TOOH to rig up SLB tools and begin building curve section of this Horizontal Well.

Circulating Stops	Curve Track 1 ROP (min/ft) Gamma (API)	Oil Shows	MD	Lithology	Geological Descriptions	Drill Stem Tests	Drilling Fluid, Surveys, Etc.

ROP (min/ft) 0 – 5
Gamma (API) 0 – 150

3200

*Lost Circulation prior to displacement. Lost Returns @ 3170'. Lost 350 BBLs Fresh Water. TOOH, cleaned up bit and TIH. Displacement

*Drilled under surface w/ mud motor and PDC bit for vertical section as well as curve and lateral.

Geologists on location
5/11/18
3178' Depth
Bruce A. Reed
Eli J. Felts

3250

3300

3350

3400

3450

Samples Saved from 3500-RTD Available @ KGS Survey

3500

3550

Topeka 3582' (-1541)

3600

3650

3700

3750

3800

3850

LS - cream to white, light gry, fine xln, v. slightly foss, poor visible porosity, sub chalky

LS - more cream to white, chalky

3900

LS - cream to white, fine xln, rare visible porosity, chalky

LS - cream to lt tan, fine to slightly med xln, poor visible porosity, decrease in chalky material

SH - dark grey - gry - black

3950

Mud-Co Mud Check
Depth: 3960'
Vis: 47
Wt: 91
WL: 10.4
LCM: 0

Heebner 3963' (-1922')

SH - black - gry, carbonaceous, few pcs bleed gas

LS - cream-gry, lt tan, fine xln, poor visible porosity, sub shaley

4000

No sample caught

Douglas Shale 4018' (-1977')

SH - trip cavings & gel balls/ trip trash

Mud-Co Mud Check
Depth: 4034'
Vis: 60
Wt: 9.1
WL: 9.2
LCM: 0

4050

SH - gry -green-grey, mostly soft, few slightly firm, slightly silty to sandy, very fine grained

KOP @ 4062' Begin Sliding vs. Rotating

SH - gry-lt gry, very soft, mushy & globular

Mud-Co Mud Check
Depth: 4073'
Vis: 60
Wt: 9.0
WL: 8.0
LCM: 0

SH - as above, few smaller chips greys-light green, slightly mottled with dark shale, very slightly silty in some