

MORNING DRILLING REPORT

SOUTHWIND DRILLING, INC.

For: H&D Exploration

RIG No. 3

Well Name: Shorty #1
 Location: 1096' FNL & 2286' FWL
 Section: 20-14S-12W
 County: Russell
 API: 15-167-24041-00-00

Elevation: GL 1724'
 KB 1732'
 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 7 joints of new 20#, 8 5/8" casing, Tally @ 300.53', Set @ 310', used 170 sacks of 60/40 Poz, 3% cc, 2% gal. cement circulated, by Quality (Ticket #1446), plug down @ pm on 11.09.15.

Production Casing: Ran 99 joints of used 14.0#, 5 1/2" casing, Tally @ 3288.90', Set @ 3297', used 425 sacks of QMDC, 1/4# Flo-seal, cemented by Quality (Ticket #1291), Job complete @ 9:30 am on 11.16.15.

Rotary Total Depth: 3300'
 Log Total Depth: 3298'

Geologist: Jim Musgrove

7:00 A.M. Depth: 3300'

7:00 A.M. Current Operation: TEAR DOWN

Spud Date & Time: 11/09/2015 @ 3:00 PM	11/09/15 Day 1	11/10/15 Day 2	11/11/15 Day 3	11/12/15 Day 4	11/13/15 Day 5	11/14/15 Day 6	11/15/15 Day 7	11/16/15 Day 8	11/17/15 Day 9	Total
Total Depth (7:00am)	0	310	1840	2340	2920	3090	3218	3300	3300	3300
Daily Progress	310	1530	500	580	170	128	82	0	0	3300
Ft. Per Hr.	72.94	88.70	46.51	36.83	24.29	21.33	25.23	0.00	0.00	51.36
Current Operation (7:00am)	Rig Up	WOC	Drilling	Drilling	DST #2	Drilling	DST #5	Run casing	Tear Down	
Formation	Surface	Surface	Shale / Lime	Shale / Lime	Lime / Shale	LKC	LKC	Arbuckle		
Fuel Used (39 Gall/Inch)	195.00	351.00	351.00	351.00	273.00	312.00	234.00	0.00		2067.00
Survey (degree & depth)	1/4' @ 310'		3/4' @ 2260'							

Mud Cost	50.00	\$1,566.37	\$3,013.87	\$721.11	\$0.00	\$0.00	\$318.06	\$0.00		\$5,619.41
Wolght (# / Gal)										
Vis (Funnel)										
Water Loss (cc)										

BIT #1										
Bit Make / Type	Reed									
Bit Size	12 1/4									4.25
Bit Hours	4.25									

BIT #2		Reed R24	Reed R24	Reed R24	Reed R24	Reed R24	Reed R24			
Bit Make / Type		7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8			
Bit Size		17.25	10.75	15.75	7.00	6.00	3.25			60.00
Bit Hours		4.25	17.25	10.75	15.75	7.00	6.00	3.25	0.00	64.25
Bit Cumulative Hours		4.25	17.25	10.75	15.75	7.00	6.00	3.25	0.00	64.25
Weight on Bit (WOB)	15,000	30,000	30,000	30,000	30,000	30,000	30,000			
RPM	120	80	80	80	80	80	80			
Pump Pressure	450	800	750	850	900	950	950			
Drilling (Rotating) Hours	4.25	17.25	10.75	15.75	7.00	6.00	3.25	0.00	0.00	64.25

Daywork Hrs. (Operator's time)										
Rat Hole (> 75 hrs)	0.50									0.50
Wait on Cement		2.00								2.00
Weather										0.00
Short Trip			1.00	1.00						2.00
Trip			3.75	2.25	6.50	7.00	4.50			24.00
Circulate			3.00	2.25	5.25	5.50	5.25			21.25
Tool			0.75	0.25	1.00	1.25	0.50			3.75
Testing			2.75	1.25	4.25	4.25	1.25			13.75
Clean Floor after DST										0.00
Logging							4.50			4.50
Nipple Down / Jet Collar							1.00			1.00
LDDP / LDDC							2.50			2.50
Run Casing / Circ / Cement	1.75						1.00	2.50		5.25
Set Slips								0.50		0.50
Lost Circulation (> 2 hrs)										0.00
Billable Hours	2.25	2.00	11.25	7.00	17.00	18.00	20.50	3.00	0.00	81.00

Non-Billable Hours (Southwind's time)										
Rig Up / Tear Down	7.25							5.00		12.25
Wait on Cement (NB)	8.00									8.00
Drill Rat Hole (< 75 hrs)	0.75									0.75
Drill Plug										0.00
Circulate / Trip (Surface)	0.50									0.50
Rig Repair										0.00
Connections	1.00	3.25	1.25	1.25			0.25			7.00
Jet/Displace		1.50	0.75							2.25
Surveys										0.00
Rig Check										0.00
Lost Circulation (< 2 hrs)										0.00
Lay Down Kelly / MH & RH										0.00
Non-Billable Hrs.	17.50	4.75	2.00	1.25	0.00	0.00	0.25	5.00	0.00	30.75

Footage Cost	\$ 3,720.00	\$ 18,360.00	\$ 6,000.00	\$ 6,960.00	\$ 2,040.00	\$ 1,536.00	\$ 984.00	\$ -	\$ -	\$ 39,600.00
Daywork Cost	\$ 675.00	\$ 600.00	\$ 3,375.00	\$ 2,100.00	\$ 5,100.00	\$ 5,400.00	\$ 6,150.00	\$ 900.00	\$ -	\$ 24,300.00
Combined Est. Cost*	\$ 4,395.00	\$ 18,960.00	\$ 9,375.00	\$ 9,060.00	\$ 7,140.00	\$ 6,936.00	\$ 7,134.00	\$ 900.00	\$ -	\$ 63,900.00

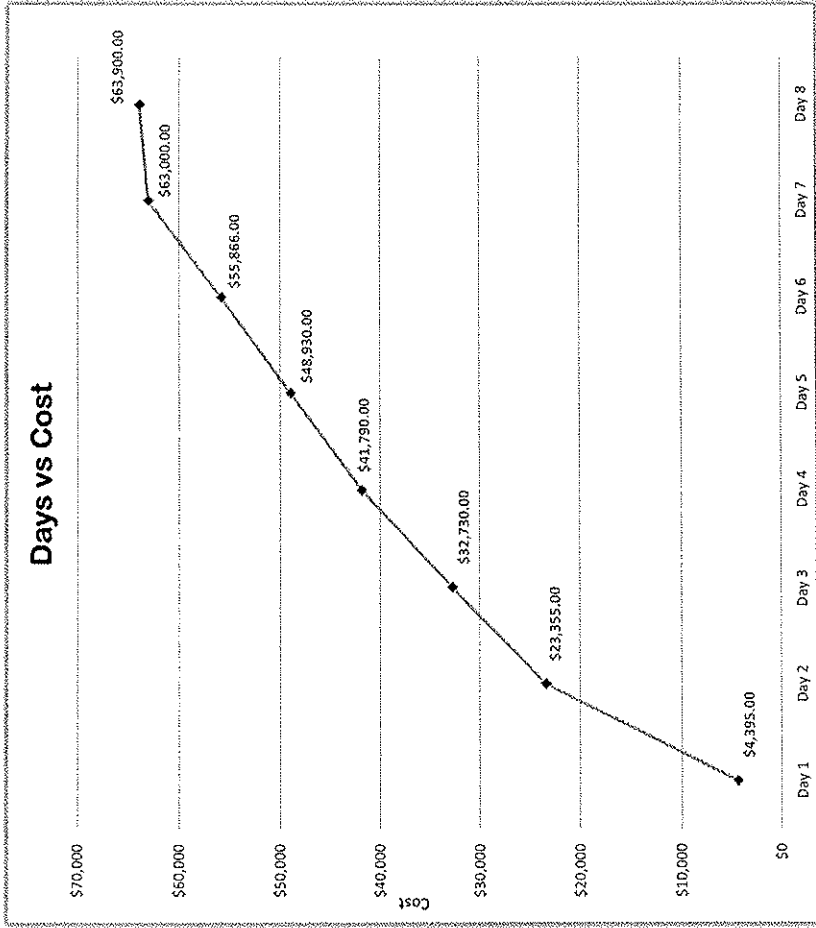
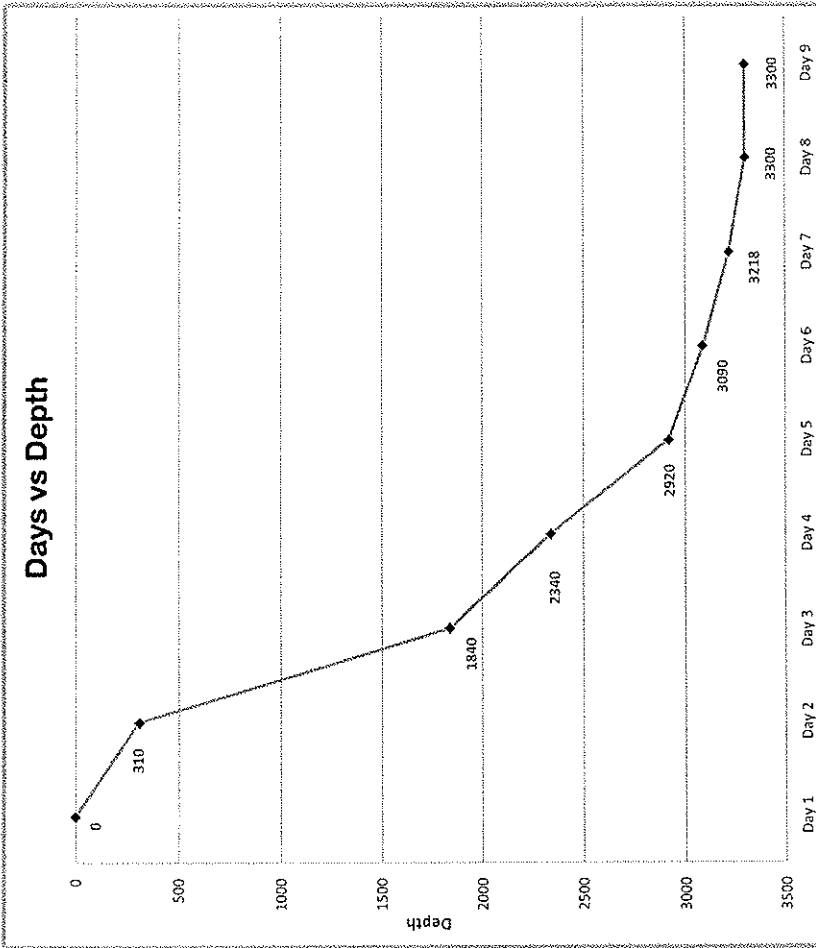
*Please note that this is estimated footage & daywork cost only. Additional charges will apply on invoice (fuel surcharge, water transfer pump, etc)

DST #1 Info - Footage Interval: 2215' - 2260' Recovery: 60' Oil Gassy Cut Mud	DST #2 Info - Footage Interval: 2884' - 2920' "LKC B-C" Recovery: 62' Gassy Oil Cut Mud
DST #3 Info - Footage Interval: 2951' - 2980' "LKC G" Recovery: 10' Mud	DST #4 Info - Footage Interval: 3010' - 3140' "LKC K-L" Recovery: 150' Mud
DST #5 Info - Footage Interval: 3150' - 3218' Recovery: 30' Clean Oil 50' Oil Cut Mud	DST #6 Info - Footage Interval: Recovery:



Job Summary Graphical Report

Southwind Rig No. 3
Shorty #1



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. 1448

Date 11-9-15	Sec. 20	Twp. 14	Range 12	County Russell	State KS	On Location	Finish 11:00PM
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Location *Bunker Hill & Hwy 40, 1E, 2S, E n 2*

Lease <i>Shorty</i>	Well No. 1	Owner
Contractor <i>Southwind #3</i>		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 <i>Surface</i>		Cha. To <i>H-D Exploration</i>
Hole Size <i>12 1/4</i>	T.D. <i>310</i>	Street
Csg. <i>8 5/8</i>	Depth <i>310</i>	City
Tbg. Size	Depth	State
Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.
Cement Left in Csg.	Shoe Joint <i>20</i>	Cement Amount Ordered <i>170 sx 60/40 3%cc, 2%gel</i>
Meas Line	Displace <i>18 1/2 bbl</i>	

EQUIPMENT

Pumptrk <i>17</i>	No.	Cementer	Common <i>102</i>
		Helper <i>Billy</i>	Poz. Mix <i>68</i>
Bulktrk <i>3</i>	No.	Driver	Gel. <i>3</i>
		Driver <i>Doug</i>	Calcium <i>7</i>
Bulktrk <i>04</i>	No.	Driver	
		Driver <i>Travis</i>	

JOB SERVICES & REMARKS

Remarks: <i>Cement did circulate.</i>	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
	Sand
	Handling <i>80</i>
	Mileage

FLOAT EQUIPMENT

	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

Pumptrk Charge *Surface*
Mileage *11*

X Signature *Jay Brien*

Tax
Discount
Total Charge

QUALITY OILWELL CEMENTING, INC.

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

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

No. 1291

Date	11-16-15	Sec.	20	Twp.	14	Range	12	County	Russell	State	Ks	On Location		Finish	9:30 AM
Lease								Location				Bunker Hill + Hwy 40, 1E, 2S			
Contractor		Shorty		Well No.		1		Owner							
Type Job		Production		Cement		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.							
Hole Size		7 7/8"		T.D.		3300'		Charge To							
Csg.		5 1/2" New 14#		Depth		3297'		H + D Exploration							
Tbg. Size				Street											
Tool				City				State							
Cement Left in Csg.		13.72'		Depth				The above was done to satisfaction and supervision of owner agent or contractor.							
Meas Line		Displace		Shoe Joint		13.72'		Cement Amount Ordered							
		80 Bas		500 gal Mud Clear		47 - 10 BLS		KCL							
				Common		425 QMBC									
Pumptrk		18 No.		Cement		TCAV2		Poz. Mix							
Bulktrk		19 No.		Driver		Doug		Gel.							
Bulktrk		Pili No.		Driver		Rick		Galcium PLH 1 Gal							
EQUIPMENT															
JOB SERVICES & REMARKS															
Remarks:		10 BL KCL before Flush													
Rat Hole		30 SKS													
Mouse Hole															
Centralizers		1, 3, 5, 7, 21, 45, 61													
Baskets		2, 21, 45, 61													
D/V or Port Collar															
Pipe on bottom		break circulation													
Pump		500 gal mud clear 48													
Discharge		Rathole w/ 30 SK back to													
5 1/2" casing		mix 395 QMBC													
1/4" shut down		wash pump & lines													
Released plug		Displaced w/ 180													
BLS of H2O		Released off													
Lift pressure		1000 #													
Land plug		1800 #													
Cement did not circulate															
Signature		Jay Brown													
Pumptrk Charge		prod string													
Mileage		11													
		FLOAT EQUIPMENT													
		Guide Shoe													
		Centralizer													
		Baskets													
		AFU Inserts													
		Float Shoe													
		Latch Down													
		Tax													
		Discount													
		Total Charge													