

MORNING DRILLING REPORT

SOUTHWIND DRILLING, INC.

For: H&D Exploration

RIG No. 8

Well Name: Michaelis #1
 Location: 1793' FNL & 2310' FWL
 Section: 25-15S-15W
 County: Russell
 API: 15-167-24007-00-00

Elevation: GL 1903'
 KB 1912'
 Est. TD: 3400'

Rig No. 8 (Pusher Darroll Yelt) 620-617-1716
 Rig No. (Doghouse) 620-666-7052
 Southwind Drilling Office 620-564-3800



Surface Casing: Ran 9 joints of new 23# 8 5/8" casing, Tally @ 380.15', Set @ 390', used 225 sacks of 60/20 Poz, 3% cc, 2% gel, cement circulated, by Quality (Ticket #6309), plug down @ 3:45 am on 12.05.14.

Production Info: Ran 82 joints of new 15.5#, 5 1/2" casing, Tally @ 3468', Set @ 3477', Port Collar @ 372', used 135 sacks, Common, 10% Salt, 5% Gileonite, 30 sacks for Rat Hole, 15 sacks for Mouse Hole, cemented by Quality (Ticket #738), Job complete @ 12:00 pm on 12.12.14.

Rotary Total Depth: 3480'

Log Total Depth:

Geologist: Jim Musgrove

7:00 A.M. Depth: 3480' 7:00 A.M. Current Operation: TEAR DOWN

Spud Date & Time:	12/04/14 Day 1	12/05/14 Day 2	12/06/14 Day 3	12/07/14 Day 4	12/08/14 Day 5	12/09/14 Day 6	12/10/14 Day 7	12/11/14 Day 8	12/12/14 Day 9	Total
Total Depth (7:00am)	0	390	1601	2615	3192	3345	3395	3408	3480	3480
Daily Progress	390	1211	1014	577	153	50	13	72		3480
FL Per Hr.	52.00	79.41	50.70	36.06	18.00	25.00	17.33	26.18	#DIV/0!	47.84
Current Operation (7:00am)	Rig Up	WOC	Drilling	CFS	Short Trip	Drilling	DST #3	DST #5	LDDP	
Formation	Surface	Surface	Lime / Shale	Lime / Shale	KC	LKC	Arbuckle	Arbuckle	Arbuckle	
Fuel Used (32.4 Gal/inch)	356.40	324.00	421.20	421.20	324.00	259.20	259.20	259.20		2624.40
Survey (degree & depth)	1' @ 390'				1' @ 3192'					

Mud Cost	\$0.00	\$0.00	\$2,216.85	\$2,877.05	\$504.75	\$0.00	\$555.85	\$1,233.00	\$0.00	\$7,387.30
Weight (# / Gal)			8.8					9.1		
Vis (Funnel)			60					48		
Water Loss (cc)								11.2		

Bit #1										
Bit Make / Type	Reed									
Bit Size	12 1/4									
Bit Hours	7.50									7.50
Bit #2										
Bit Make / Type		Reed S52	Reed S52	Reed S52	Reed S52	Reed S52	Reed S52	Reed S52	Reed S52	
Bit Size		7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	
Bit Hours		15.25	20.00	16.00	8.50	2.00	0.75	2.75		65.25
Bit Cumulative Hours	7.50	15.25	20.00	16.00	8.50	2.00	0.75	2.75	0.00	72.75
Weight on Bit (WOB)	15,000	20,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	
RPM	120	75	75	75	75	75	70	80		
Pump Pressure	370	80	700	840	820	800	810	820		
Drilling (Rotating) Hours	7.50	15.25	20.00	16.00	8.50	2.00	0.75	2.75	0.00	72.75

Daywork Hrs. (Operator's time)										
Rat Hole (> .75 Hrs)										0.00
Wait on Cement	3.25	4.75								8.00
Trip				1.25	9.00	10.75	12.25	6.00		39.25
Circulate			0.50	4.00	2.25	4.75	4.25	3.75		19.50
Tool					0.50	1.25	2.50	0.50		4.75
Testing					2.75	5.25	4.25	1.50		13.75
Clean Floor after DST										0.00
Wait on Orders								0.50		0.50
Logging								4.00		4.00
Nipple Down / Jet Cellar									1.25	1.25
LDDP / LDDC								4.00		4.00
Run Casing / Circ / Cement	2.00								3.75	5.75
Set Slips								0.50		0.50
Wait on Loggers										0.00
Lost Circulation (> 2 hrs)										0.00
Billable Hours	5.25	4.75	0.50	5.25	14.50	22.00	23.25	20.25	5.50	101.25

Non-Billable Hours (Southwind's time)										
Rig Up / Tear Down	7.50								10.50	18.00
Wait on Cement (NB)										0.00
Drill Rat Hole (<.75 hrs)	0.50									0.50
Drill Plug										0.00
Circulate / Trip (Surface)	0.75									0.75
Rig Repair		0.75		0.25	0.25			1.00		2.25
Connections	2.00	2.25	2.50	2.25	0.75					9.75
Jet/Displace	0.25	1.00	1.00	0.25						2.50
Surveys	0.25									0.25
Rig Check										0.00
Lost Circulation (< 2 hrs)										0.00
Lay Down Kelly / MH & RH										0.00
Circulate (NB)										0.00
Non-Billable Hrs.	11.25	4.00	3.50	2.75	1.00	0.00	0.00	1.00	10.50	34.00

Footage Cost	\$ 5,460.00	\$ 16,954.00	\$ 14,198.00	\$ 8,078.00		\$ 700.00	\$ 182.00	\$ 1,008.00	\$ -	\$ 46,578.00
Daywork Cost	\$ 1,837.50	\$ 1,662.50	\$ 175.00	\$ 1,837.50	\$ 5,075.00	\$ 7,700.00	\$ 8,137.50	\$ 7,087.50	\$ 1,925.00	\$ 35,437.50
Combined Est. Cost*	\$ 7,297.50	\$ 18,616.50	\$ 14,371.00	\$ 9,915.50	\$ 5,075.00	\$ 8,400.00	\$ 8,319.50	\$ 8,095.50	\$ 1,925.00	\$ 82,015.50

*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: 3145' - 3192' Recovery: 78' Mud LKC "A-D"	DST #2 Info - Footage Interval: 3270' - 3370' Recovery: 676' Oil Cut Watery Mud LKC "H-J"
DST #3 Info - Footage Interval: 3360' - 3395' Recovery: 5' Oil Cut Mud "Arbuckle"	DST #4 Info - Footage Interval: 3360' - 3400' Recovery: 1' Oil 29' Oil Cut Mud "Arbuckle"
DST #5 Info - Footage Interval: 3360' - 3408' Recovery: 33' Mud "Arbuckle"	DST #6 Info - Footage Interval: Recovery:

Anhydrite @ 940' - 976'

Displaced @

980'
 105 SX
 Per Corral
 Casey
 135 SX
 5 1/2
 8470
 top

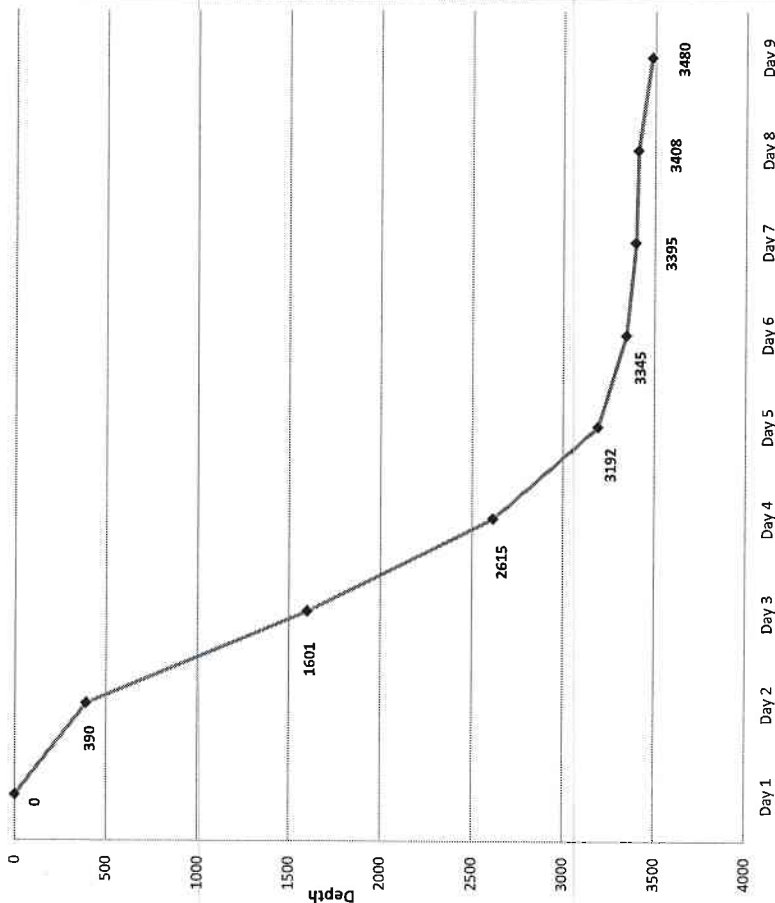


Job Summary Graphical Report

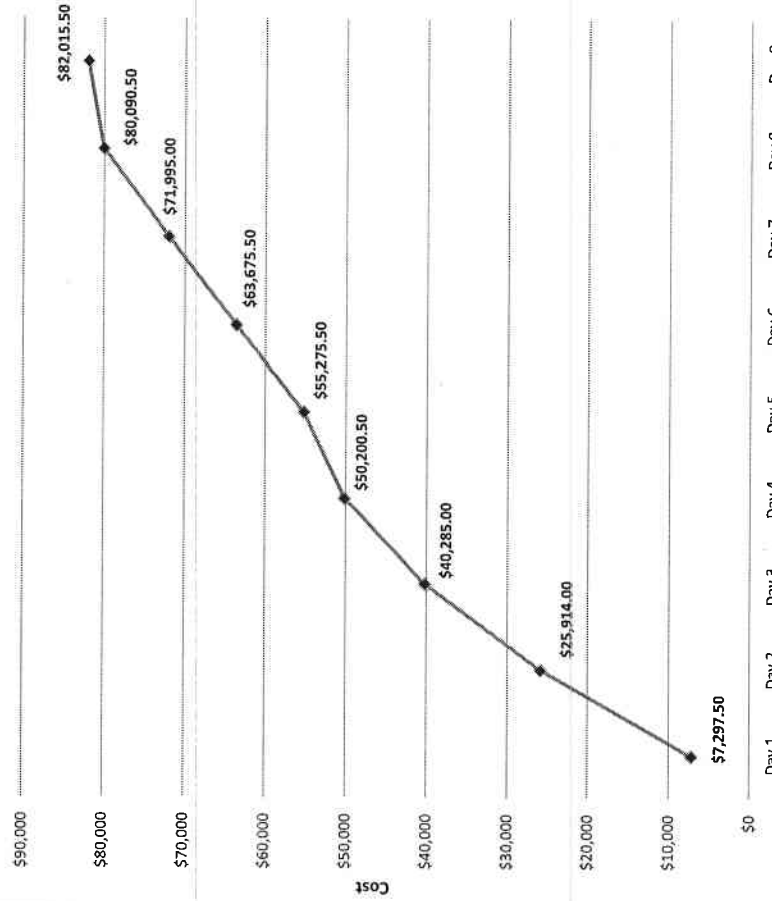
Southwind Rig No. 8

Michaelis #1

Days vs Depth



Days vs Cost



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. 738

Date	12-12-14	Sec.	25	Twp.	15	Range	15	County	Russell	State	KS	On Location		Finish	12:00 PM
------	----------	------	----	------	----	-------	----	--------	---------	-------	----	-------------	--	--------	----------

Location *Millberger 1N 1 1/2 W S10E*

Lease *Michaelis* Well No. *41* Owner *To Quality Oilwell Cementing, Inc.*

Contractor *Southwind #8* 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 *Production String* Charge To *H-D*

Hole Size *7 7/8* T.D. *3480* Street

Csg. *5 1/2* Depth *3477* City State

Tbg. Size Depth *972* The above was done to satisfaction and supervision of owner agent or contractor.

Tool *Port Collar* Depth *972* Cement Amount Ordered *1800 on 10% Salt, 5% Gilsontite*

Cement Left in Csg. Shoe Joint *19.72* Cement Amount Ordered

Meas Line Displace *82 1/4 bbl*

EQUIPMENT

Pumptrk *5* No. *David* Common

Bulktrk *1* No. *Tyson* Poz. Mix

Bulktrk *Pu* No. *Brett* Gel.

JOB SERVICES & REMARKS

Remarks: Hulls

Rat Hole *30 gal* Salt

Mouse Hole *15 gal* Flowseal

Centralizers *-1, 3, 5, 7, 9, 11, 13 + 60* Kol-Seal

Baskets *2 + 58* Mud CLR 48 *- 500 gal*

~~Port Collar~~ *5 + 59 @ 972* CFL-117 or CD110 CAF 38 *- 20 bbl KCL*

Run 5 min at Est circulation Sand

Mix Mud Plug Handling

Plug Rat + Mouse Mileage *5 1/2* **FLOAT EQUIPMENT**

Mixed 135 down 5 1/2 Guide Shoe

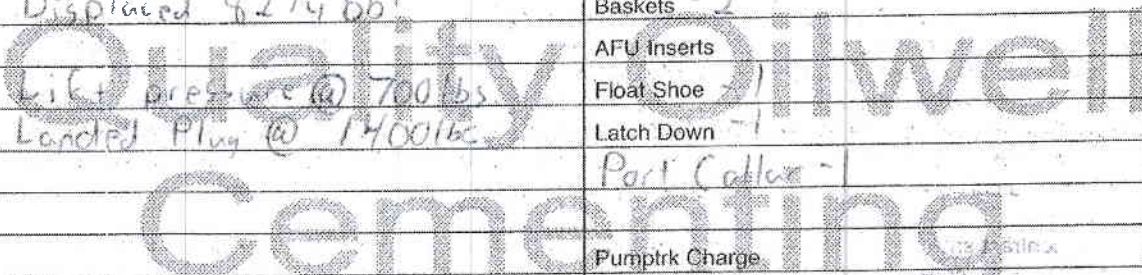
Displaced 82 1/4 bbl Centralizer *- 8*

Libt pressure @ 700 lbs Baskets *- 2*

Landed Plug @ 1400 lbs AFU Inserts

AFU Inserts Float Shoe *- 1*

Latched Plug @ 1400 lbs Latch Down *- 1*



X Signature *[Signature]*

Pumptrk Charge	
Mileage	
Tax	
Discount	
Total Charge	