

MORNING DRILLING REPORT

For: H&D Exploration, LLC

SOUTHWIND DRILLING, INC.

RIG No. 8

Well Name: Kerschner #1
Location: 808' FSL & 1917' FEL
Section: 29-24S-22W
County: Hodgeman
API: 15-083-21938-00-00

GL Elevation: 2399'
KB: 2409'
Est. TD: 5000'
Conductor String: N/A

Rig No. 8 (Pusher Bill Sandira) 620-417-0706

Rig No. 8 (Doghouse) 620-568-7156

Southwind Drilling Office 620-564-3800

Surface Casing: Ran 19 joints of new 238, 5 5/8" casing, Tally @ 802', Set @ 814', used 400 sacks of 60/40 poz, 3%cc, 2% gel, cement circulated, by Quality (Ticket #288), plug down @ 4:30 pm on 08.11.17.

Production Info: Plugged well with 170 sacks of 60/40 Poz, 4% gel, 1/46 Flo Seal, 1st plug @ 1600' w/ 50 sacks, 2nd plug @ 880' w/ 50 sacks, 3rd plug @ 80' w/ 20 sacks, 30 sacks for Rathole, 20 sacks for Mousehole, cemented by Quality (Ticket #367), job complete @ 1:00 pm on 08.20.17.

Rotary Total Depth: 4820'

Log Total Depth: 4821'

Geologist: Jim Musgrove

7:00 A.M. Depth: 4820'

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

Spud Date & Time: 8/10/17 @ 8:15 PM	08/10/17 Day 1	08/11/17 Day 2	08/12/17 Day 3	08/13/17 Day 4	08/14/17 Day 5	08/15/17 Day 6	08/16/17 Day 7	08/17/17 Day 8	08/18/17 Day 9	08/19/17 Day 10	08/20/17 Day 11	Total
Total Depth (7:00am)	0	790	918	2126	2983	3645	4213	4604	4699	4738	4820	4820
Daily Progress	790	128	1208	857	662	568	391	95	39	82		4820
Fl. Per Hr.	126.40	73.14	75.50	45.71	34.39	29.89	18.40	15.83	19.50	19.29	#DIV/0!	42.18
Current Operation (7:00am)	Rig Up	Drilling	Repair	Drilling	Drilling	Drilling	Drilling	Drilling	DST #1	TWBB	TWBB After Log	
Formation	Surface	Shale / Rock	Shale / Rock	Sand / Shale	Shale / Rock	Shale / Rock	Lime / Shale	Lime / Shale	Cherokee-Lime	Miss. Spengen	Mississippi	
Fuel Used (32.4 Gall/Inch)	226.80	129.60	356.40	453.60	421.20	388.80	518.40	324.00	226.80	324.00	64.80	3434.40
Survey (degree & depth)		12° @ 815'						1° @ 4699'		34° @ 4890'		

Mud Cost	\$0.00	\$1,346.94	\$0.00	\$2,577.46	\$0.00	\$3,816.09	\$466.87	\$344.01	\$301.58	\$0.00	-	\$9,852.95
Weight (# / Gal)	-	-	-	-	8.8	8.3	8.8	9.2	9.0	9.0	-	-
Vis (Funnel)	-	-	-	-	50	45	40	47	48	48	-	-
Water Loss (cc)	-	-	-	-	-	8.0	9.0	8.6	9.4	12.6	-	-

Bit #1												
Bit Make / Type	Reed RR											
Bit Size	12 1/4											
Bit Hours	6.25											6.25

Bit #2												
Bit Make / Type	Reed R22AP	Reed R22AP	Reed R22AP	Reed R22AP	Reed R22AP	Reed R22AP	Reed R22AP	Reed R22AP	Reed R22AP	Reed R22AP	Reed R22AP	
Bit Size	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	
Bit Hours	1.75	16.00	18.75	19.25	19.00	21.25	6.00	2.00	4.25	0.00		108.25
Bit Cumulative Hours	6.25	1.75	16.00	18.75	19.25	19.00	21.25	6.00	2.00	4.25	0.00	114.50
Weight on Bit (WOB)	15,000	25,000	30,000	30,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	
RPM	120	85	85	85	85	85	85	85	85	85	85	
Pump Pressure	800	900	1050	1050	900	1070	1130	1050	1150	1200	1200	
Drilling (Rotating) Hours	6.25	1.75	16.00	18.75	19.25	19.00	21.25	6.00	2.00	4.25	0.00	114.50

Daywork Hrs. (Operator's time)

Rat Hole (> .75 Hrs)												0.00
Wait on Cement		4.00										4.00
Short Trip												0.00
Trip		1.50						10.50	11.75	5.00	0.50	28.25
Circulate		0.50					0.50	3.75	4.25	8.50		17.50
Tool								0.50	1.50			2.00
Testing								2.00	4.00			6.00
Clean Floor after DST												0.00
Logging										5.00		5.00
LDDP / LDDC / PLUG											4.75	4.75
Run Casing / Circ / Cement		2.50										2.50
Bit Trip												0.00
Jet Collar / Set Slips											0.50	0.50
Survey (Operator Request)												0.00
Nipple Down												0.00
Billable Hours	6.00	8.50	0.00	0.00	0.00	0.00	0.50	16.75	21.50	18.50	5.75	71.50

Non-Billable Hours (Southwind's time)

Rig Up / Tear Down	12.00										9.50	21.50
Wait on Cement (NB)		8.00										8.00
Drill Rat Hole (< .75 hrs)	0.75											0.75
Drill Plug		0.50										0.50
Circulate / Trip (Surface)		0.75										0.75
Rig Repair	0.50	1.25	2.50	0.75	0.25	2.00			0.25			7.50
Connections	3.50	0.25	3.75	2.25	2.00		1.25	0.25		0.50		16.00
Jet/Displace	1.00	2.75	0.75	1.50	1.75	0.25	0.25					8.25
Surveys		0.25					0.25			0.25		0.75
Rig Check			1.00	0.75	0.75	0.75	0.75	0.75		0.50		5.25
Trip Time (NB)												0.00
Lost Circulation (< 2 hrs)												0.00
Lay Down Key / MH & RH											0.75	0.75
Non-Billable Hrs.	17.75	13.75	8.00	5.25	4.75	5.00	2.25	1.25	0.50	1.25	10.25	70.00

Footage Cost	\$ 8,690.00	\$ 1,408.00	\$ 13,288.00	\$ 9,427.00	\$ 7,282.00	\$ 6,248.00	\$ 4,301.00	\$ 1,045.00	\$ 429.00	\$ 902.00	\$ -	\$ 53,020.00
Daywork Cost	\$ -	\$ 2,847.50	\$ -	\$ -	\$ -	\$ -	\$ 167.50	\$ 5,811.25	\$ 7,202.50	\$ 6,197.50	\$ 1,926.25	\$ 23,952.50
Combined Est. Cost*	\$ 8,690.00	\$ 4,255.50	\$ 13,288.00	\$ 9,427.00	\$ 7,282.00	\$ 6,248.00	\$ 4,468.50	\$ 6,856.25	\$ 7,631.50	\$ 7,099.50	\$ 1,926.25	\$ 76,972.50

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

DST #1 Info -

Footage Interval: 4627' - 4699' Cherokee Lime
Recovery: 58' Gas, 60' Slightly Oil Cut Mud

DST #2 Info -

Footage Interval: 4717' - 4738' Mississippi Spengen
Recovery: 75' Gas, 50' Oil Cut Mud

Anhydrite @ 1560' - 1600'

Displaced @ 3395' - 3428'

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. 285

Date	8-11-17	Sec.	29	Twp.	24	Range	22	County	Hodgeman	State	Ks	On Location		Finish	4:30 PM
Lease								Kerschner		Well No.		1			
Contractor								Southwind 8		Owner					
Type Job								Surface		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				12 1/4"		T.D.		816'		Charge To		H D Exploration			
Csg.				8 5/8"		Depth		815'		Street					
Tbg. Size						Depth				City		State			
Tool						Depth				The above was done to satisfaction and supervision of owner agent or contractor.					
Cement Left in Csg.				42'		Shoe Joint		42'		Cement Amount Ordered 400 60/40 4% CC 2% Gel 1/2 #Flt 320					
Meas Line						Displace		49 1/4 BLS							
EQUIPMENT										Common					
Pumptrk				16		No.		Cementer		240					
Bulktrk				21		No.		Helper		160					
Bulktrk				P.H.		No.		Driver		8					
Bulktrk				P.H.		No.		Driver		18					
Bulktrk				P.H.		No.		Driver							
JOB SERVICES & REMARKS										Hulls					
Remarks: Cement did Circulate										Salt					
Rat Hole										Flowseal 200 Flt					
Mouse Hole										Kol-Seal					
Centralizers										Mud CLR 48					
Baskets										CFL-117 or CD110 CAF 38					
D/V or Port Collar										Sand					
										Handling 436					
										Mileage					
										FLOAT EQUIPMENT					
										Guide Shoe Rubber plug					
										Centralizer Baffle plate					
										Baskets					
										AFU Inserts					
										Float Shoe					
										Latch Down					
										Pumptrk Charge Long Surface					
										Mileage 25					
X Signature William Sanders										Tax					
										Discount					
										Total Charge					

Federal Tax I.D.# 20-2886107

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

No.

Date	8-20-17	Sec.	29	Twp.	24	Range	22	County	Hodgeman	State	KS	On Location		Finish	1:00pm
								Location	Spearville 5 N 1/2 W 1 into						
Lease	Kerschner							Well No.	1	Owner					
Contractor	Senthurina #8							To Quality Oilwell Cementing, Inc.							
Type Job	Rotary Plug							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.	4820	Charge To	H-D Exploration				
Csg.								Depth		Street					
Tbg. Size								Depth		City	State				
Tool								Depth		The above was done to satisfaction and supervision of owner agent or contractor.					
Cement Left in Csg.								Shoe Joint		Cement Amount Ordered	170 60/40 4 1/2 CBL 1/4 #F6				
Meas Line								Displace							
EQUIPMENT															
Pumptrk	5	No.	Cement				Helper	102	Common	102					
Bulktrk		No.	Driver				Driver	68	Poz. Mix	68					
Bulktrk	15	No.	Driver				Driver	6	Gel.	6					
JOB SERVICES & REMARKS															
Remarks:										Hulls					
Rat Hole 30 SK										Salt					
Mouse Hole 20 SK										Flowseal 50#					
Centralizers										Kol-Seal					
Baskets										Mud CLR 48					
D/V or Port Collar										CFL-117 or CD110 CAF 38					
1st 1600' 50SK										Sand					
2nd 850' 50SK										Handling 176					
3rd 100' 20SK										Mileage					
										FLOAT EQUIPMENT					
										Guide Shoe					
										Centralizer					
										Baskets					
										AFU Inserts					
										Float Shoe					
										Latch Down					
										Pumptrk Charge plug					
										Mileage 55					
										Tax					
										Discount					
										Total Charge					
Signature: [Signature]															