



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #104HB

Report Date: 7/20/2017
Report #: 11.0, DFS: 69.60
Time Log DFS: 3.85
Depth Progress: 466.00

API/UWI No. 42461405810000	Surface Legal Location A-U47; SEC. 11; BLK 4; UL SURVEY	Well License/Permit No. 824982	State/Province TEXAS
Original Spud/Spud Rig Date 7/19/2017 23:00	Rig Release Date	KB to GL (ft) 25.00	KB-Casing Flange Distance (ft)
Original Spud/Spud Rig Date 5/11/2017	Weather CLEAR	Temperature (°F) 74.0	Road Condition GOOD
Current Status/OART DRILLING AHEAD IN VERTICAL SURFACE SECTION		24 Hour Forecast TD VERTICAL SURFACE SECTION, CIRC CLEAN UP CYCLE, PUMP TWO HI VIS SWEEPS, MAKE WIPER TRIP TO 8" DCs, CIRC OUT AT TD, PUMP HI VIS SWEEPS, SPOT 100 BBL HI VIS PILL ON BTM, RACK BACK DP, LD DIRECTIONAL BHA, PREP TO RUN CSG, RUN SURFACE CSG, PREP FOR CMT OPERATIONS AND CMT CSG.	

Short Report
CONTINUE TO WAIT ON CHAIN SPROCKET, INSTALLED PARTS FOR SKATE, WAIT ON ADDITIONAL PARTS,
INSTALLED PARTS FOR SKATE, P/U & M/U DIRECTIONAL BHA, TEST SURFACE LINES TO 1500 PSI, TAG
BOTTOM @ 109', CONTINUE TO DRILL AHEAD IN VERTICAL SURFACE SECTION.

Mud Volumes						
Active Volume (bbl) 430.5	Var Active Vol (bbl) -99.2	Balance (bbl) -99.2	Tank Volume (bbl) 388.0	Additions (bbl) 0.0	Losses (bbl) 0.0	Hole Volume (bbl) 42.5

Time Log						
Start Time	End Time	Dur (hr)	Phase	Ops Code	Sub Code	Time Code
06:00	13:00	7.00	01RGUP, Rig Up	DT	b	S
WAIT ON CHAIN SPROCKET FOR SKATE ON PIPE WRANGLER.						
OFFLINE: FILLED CELLAR AND PUMP DOWN FLOW LINE						
13:00	15:30	2.50	01RGUP, Rig Up	DT	b	S
INSTALLED BUSHINGS AND PARTS ON SKATE / CATWALK PIPE WRANGLER.						
15:30	18:30	3.00	01RGUP, Rig Up	DT	b	S
OFF DRILLERS SIDE SKATE BELL NOT INSTALLED WAITING ON PARTS TO ARRIVE.						
18:30	20:30	2.00	01RGUP, Rig Up	DT	b	S
PARTS ARRIVED, INSTALLED CHAIN AND SKATE BELL.						
20:30	23:00	2.50	01RGUP, Rig Up	TP	b	O
PICK UP DIRECTIONAL BHA AND SCRIBE MOTOR. PICK UP MWD AND ORIENT TOOL. MAKE UP SECURITY SF66M, S/N: 12501436 BIT. TEST SURFACE LINES TO 1500 PSI TAG BOTTOM AT 109'						
23:00	06:00	7.00	07SHVD, Surf Hole Vert Drill	DR	a	O
ROTATE / SLIDE DRLG IN VERTICAL SURFACE SECTION F/109' TO 575'						
466' @ 67 FPH AVG ROP						

Mud Checks						
Time 15:00	Type SPUD MUD	Depth (ftKB) 100.0	Density (kg/m³) (lb/g...) 8.35	Funnel Viscosity (s/qt) 28	PV Calc (cP) 1.0	YP Calc (lb/100ft²) 4.002
Gel 10 sec (kPa) (lb...) 1.000	Gell 10 min (kPa) (l...) 2.001	Gel 30 min (kPa) (lb...) 3.001	Filtrate (mL/30min) 95.0	Filter Cake (1/32") 6.5	pH 6.5	Solids (%) 87
MBT (lb/bbl)	Percent Oil (%) 99.7	Percent Water (%) 99.7	Chlorides (kg/m³) (...) 2,400.000	Calcium (kg/m³) (m...) 2,400.000	Potassium (mg/L) 8.0	Electric Stab (V) 87
Time 05:00	Type SPUD MUD	Depth (ftKB) 155.0	Density (kg/m³) (lb/g...) 8.40	Funnel Viscosity (s/qt) 28	PV Calc (cP) 1.0	YP Calc (lb/100ft²) 4.002
Gel 10 sec (kPa) (lb...) 1.000	Gell 10 min (kPa) (l...) 2.001	Gel 30 min (kPa) (lb...) 3.001	Filtrate (mL/30min) 90.0	Filter Cake (1/32") 8.0	pH 8.0	Solids (%) 87
MBT (lb/bbl)	Percent Oil (%) 99.3	Percent Water (%) 99.3	Chlorides (kg/m³) (...) 3,000.000	Calcium (kg/m³) (m...) 3,000.000	Potassium (mg/L) 8.0	Electric Stab (V) 87

Mud Volumes			
Tank/Addition/Loss	Type	Volume (bbl)	Subtype
Tank	Tank 1		ACTIVE
Loss	Surface		SCE
Loss	Hole		HOLE
Hole	PIPE CAP	1.2	PIPE CAP
Hole	Hole	41.3	ANNULUS
Addition	Water		DRILL WATER
Tank	RESERVE	388.0	RESERVE

Drill Strings			
BHA #2, Surface			
Bit Run 1	Drill Bit 17 1/2in, SF66M, 12501436	IADC Bit Dull -----	TFA (incl Noz) (in²) 1.77
Nozzles (1/32") 16/16/16/16/16/16/16		BHA Length (ft) 1,136.50	String Wt (1000lbf) 66.6

AFE Number DD.17.30781.CAP.DRL	AFE+Supp Amt (Cost) 2,331,000.00
Day Total (Cost) 57,245	Cum To Date (Cost) 517,646
Mud Field Est (Cost) 1,150	Cum Mud Field Est (Co... 6,774
Start Depth (ftKB) 109.0	End Depth (ftKB) 575.0
Planned Formation WOLFCAMP B	Planned TMD (ftKB) 19,337.0
Last Casing String Conductor Casing, 106.0ftKB	

Daily Contacts	
Job Contact	Mobile
BRIAN ALLEMAN, Engineer	214-978-8000
DAVID LANKFORD, Foreman	281-220-5828
MARTY ARREZOLA, Consultant	281-220-5828
DEAN DUFFY, Rig Clerk/Logistics	281-220-5829

Personnel Log	
Head Count	20.0

Rigs			
HELMERICH & PAYNE DRILLING, 3			
Contractor HELMERICH & PAYNE DRILLING		Rig Number 394	
Rig Supervisor JARED CARPENTER, Toolpusher		Phone Mobile	
1, Gardner-Denver, PZ-11			
Pump Number 1	Pwr (hp) 1,300.0	Rod Diameter...	
Liner Size (in) 6	Stroke (in) 11.00	Vol/Stk OR (b... 0.100	
P (psi)	Slow Spd	Strokes (s...	Eff (%)

2, Gardner-Denver, PZ-11		
Pump Number 2	Pwr (hp) 1,300.0	Rod Diameter... 6
Liner Size (in) 6	Stroke (in) 11.00	Vol/Stk OR (b... 0.100
P (psi)	Slow Spd	Strokes (s... Eff (%)
P (psi)	Slow Spd	Strokes (s... Eff (%)

Mud Additive Amounts		
Mud Additive Description	Field Est (Cost/unit)	Consumed
12 HR MUD ENGINEER	700.00	1.0
AQUAGEL	150.00	3.0

Job Supplies		
Supply Item Description DIESEL FOR OBM	Unit Label Gal	
Total Received 9,888.0	Total Consumed 0.0	On Loc 9,888.0
Supply Item Description DRILLING CUTTINGS	Unit Label Cu. Yds	
Total Received 0.0	Total Consumed 0.0	On Loc 0.0
Supply Item Description DRILLING WATER	Unit Label Bbl	
Total Received 0.0	Total Consumed 0.0	On Loc 0.0
Supply Item Description FUEL	Unit Label Gal	
Total Received 27,426.0	Total Consumed 3,663.0	On Loc 11,965.0



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Mud Motors

Motor Bend 1.50 FIXED	Bit to Bend 7.19	Rotor Nozzle Diameter (in)
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Drill String Components

Item Des	Manual/Tally Jts	OD (in)	ID (in)	Len (ft)	Top Thread
HWDP	21	5	3.00	639.59	IF
XO Sub		6 1/2	2.50	3.61	IF
Drill Collar	9	6 1/2	2.50	273.10	XH
XO Sub		7 7/8	3.88	3.25	XH
Drill Collar	3	8	2.81	92.27	NC 56
XO Sub		8	3.13	2.69	NC 56
Drill Collar - Non Mag		8	3.75	30.12	Reg
Non-Mag Hangoff Sub		8 1/16	3.75	6.21	Reg
Drill Collar - Non Mag		8 1/16	3.81	29.93	Reg
Shock Sub		8 1/4	3.25	13.08	Reg
Stabilizer		8 1/16	2.94	8.06	Reg
Mud Motor - Bent Housing		9 5/8	2.50	33.09	Reg

Drilling Parameters

Wellbore UNIVERSITY 3-35 #104HB	Start Depth (ftKB) 344.0	End Depth (ftKB) 355.0	Cum Depth (ft) 246.00	Drilling Time (hr) 0.25	Cum Drill Time (hr) 4.50	Interval ROP (ft/hr) 44.0	Flow Rate (gpm) 725
WOB (1000lbf) 6	Rotary RPM (rpm) 0	SPP (psi) 950.0	Drill Str Wt (1000... 38	PU Str Wt (1000lbf) 40	SO Str Wt (1000lbf) 38	Drilling Torque 0.0	Off Btm Tq 0.0
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 55.5	HP/Area (hp/in²) 0.2	Bit Jet Velocity (ft/s) 131.7	Bit Pressure Drop (psi) 131.2	% P @ bit (%) 14
Max Casing AV (ft/min) 0.0	Max Open Hole AV (ft/min) 83.2	Min Casing AV (ft/min) 0.0	Min Open Hole AV (ft/min) 49.7	ECD End (lb/gal) 8.35

Error

Wellbore UNIVERSITY 3-35 #104HB	Start Depth (ftKB) 355.0	End Depth (ftKB) 433.0	Cum Depth (ft) 324.00	Drilling Time (hr) 1.00	Cum Drill Time (hr) 5.50	Interval ROP (ft/hr) 78.0	Flow Rate (gpm) 724
WOB (1000lbf) 14	Rotary RPM (rpm) 49	SPP (psi) 1,164.0	Drill Str Wt (1000... 75	PU Str Wt (1000lbf) 80	SO Str Wt (1000lbf) 73	Drilling Torque 8.0	Off Btm Tq 0.0
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 55.3	HP/Area (hp/in²) 0.2	Bit Jet Velocity (ft/s) 131.5	Bit Pressure Drop (psi) 130.9	% P @ bit (%) 11
Max Casing AV (ft/min) 0.0	Max Open Hole AV (ft/min) 83.1	Min Casing AV (ft/min) 0.0	Min Open Hole AV (ft/min) 49.6	ECD End (lb/gal) 8.35

Error

Wellbore UNIVERSITY 3-35 #104HB	Start Depth (ftKB) 433.0	End Depth (ftKB) 450.0	Cum Depth (ft) 341.00	Drilling Time (hr) 0.25	Cum Drill Time (hr) 5.75	Interval ROP (ft/hr) 68.0	Flow Rate (gpm) 724
WOB (1000lbf) 7	Rotary RPM (rpm) 0	SPP (psi) 1,112.0	Drill Str Wt (1000... 75	PU Str Wt (1000lbf) 80	SO Str Wt (1000lbf) 73	Drilling Torque 0.0	Off Btm Tq 0.0
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 55.3	HP/Area (hp/in²) 0.2	Bit Jet Velocity (ft/s) 131.5	Bit Pressure Drop (psi) 130.9	% P @ bit (%) 12
Max Casing AV (ft/min) 0.0	Max Open Hole AV (ft/min) 83.1	Min Casing AV (ft/min) 0.0	Min Open Hole AV (ft/min) 49.6	ECD End (lb/gal) 8.35

Error

Wellbore UNIVERSITY 3-35 #104HB	Start Depth (ftKB) 450.0	End Depth (ftKB) 575.0	Cum Depth (ft) 466.00	Drilling Time (hr) 1.25	Cum Drill Time (hr) 7.00	Interval ROP (ft/hr) 100.0	Flow Rate (gpm) 800
WOB (1000lbf) 14	Rotary RPM (rpm) 70	SPP (psi) 1,458.0	Drill Str Wt (1000... 80	PU Str Wt (1000lbf) 82	SO Str Wt (1000lbf) 79	Drilling Torque 8.0	Off Btm Tq 0.0
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Job Supplies

Supply Item Description POTABLE WATER	Unit Label Gal
Total Received 17,000.0	Total Consumed 17,000.0
On Loc 0.0	
Supply Item Description SEWAGE	Unit Label Gal
Total Received 8,900.0	Total Consumed 8,900.0
On Loc 0.0	
Supply Item Description THREAD PROTECTORS	Unit Label Box
Total Received 1.0	Total Consumed 1.0
On Loc 0.0	
Supply Item Description TRASH/GENERAL WASTE	Unit Label Box
Total Received 0.0	Total Consumed 0.0
On Loc 0.0	

Safety Checks

Time	Type	Safety Topic
17:30	Pre-Tour	LOCKOUT TAG OUT
05:30	Pre-Tour	RIG FLOOR DANGER ZONES / HOUSE KEEPING

Wellbores

Wellbore Name
UNIVERSITY 3-35 #104HB

Kick Offs & Key Depths

Type	Top Depth (ftKB)



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Hydraulic Calculations

Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
75.0	0.3	145.3	160.7	11
Max Casing AV (ft/min)	Max Open Hole AV (ft/min)	Min Casing AV (ft/min)	Min Open Hole AV (ft/min)	ECD End (lb/gal)
0.0	91.8	0.0	52.3	8.40
Error				

Kicks

Kick Date	Kick Depth (ftKB)	Control Date	Control Depth (ftKB)	Kick Class
Kill Notes				

Lost Circulation

Start Date	Top Depth (ftKB)	Bottom Depth (ftKB)	Ops In Prog	Vol Lost Tot (bbl)	End Date
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Interval Problems

Problem Type	Problem Subtype	Start Date	Start Depth (ftKB)	End Depth (ftKB)	Est Cost (Cost)	Est Lost Time (hr)
Other	CATWALK SKATE GEAR AND BELL	7/19/2017	106.0	106.0		

Action Taken

C/O PARTS ON CATALK , PIPE WRANGLER AND SKATE.

Interval Lessons

Lesson Type	Start Date	End Date	Start Depth (ftKB)	End Depth (ftKB)	Est Cost Saving (Co..)	Est Time Saving (hr)
Comment						

Safety Incidents

Time	Category	Type	Subtype	Cause	Lost time?	Severity

Leak Off and Formation Integrity Tests

Run Date	OD (in)	Set Depth (ft...)	Set Depth (T...)	Comment	MACP Press...
Test Date	Test Type			Fluid Density (lb/gal)	EMW (lb/gal)

Survey Data

MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
236.00	0.52	219.79	236.00	-0.89	-0.82	-0.69	0.22
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
298.00	0.62	221.18	297.99	-1.39	-1.29	-1.09	0.16
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
358.00	0.64	193.51	357.99	-1.99	-1.86	-1.38	0.50
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
419.00	0.86	167.20	418.99	-2.76	-2.64	-1.36	0.66
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
575.00	0.86	167.20	574.97	-4.98	-4.92	-0.84	0.00