



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/15/2017
Report #: 13.0, DFS: 11.48
Time Log DFS: 11.48
Depth Progress: 154.00

API/UWI No. 42461405920000	Surface Legal Location A-U47; SEC. 11; BLK. 4 CCSD&RGNG RR CO	Well License/Permit No. 826301	State/Province TEXAS
Original Spud/Spud Rig Date 6/3/2017 18:30	Rig Release Date	KB to GL (ft) 25.00	KB-Casing Flange Distance (ft)
Original Spud/Spud Rig Date 6/3/2017	Weather CLEAR/WINDY	Temperature (°F) 81.0	Road Condition GOOD
Current Status/OART BUILD CURVE AND SURVEY @ REPORT TIME.	24 Hour Forecast BUILD CURVE AND SURVEY.		

Short Report
CONTINUE TO P/U DIRECTIONAL ASSEMBLY. RIG UP BACKYARD HOSES AND SHAKER SLIDES. FILL PITS WITH OBM. TIH TO 7686' WITH DIRECTIONAL ASSEMBLY. SLIP AND CUT DRILL LINE. PERFORM RIG SERVICE. INSTALL ROTATING HEAD ELEMENT, TIH F/7686' TO 7793'. DISPLACE HOLE WITH OBM. WASH AND REAM F/ 7793' TO 7803'. DRILL AND SURVEY F/ 7803' TO 7914'. BUILD AND SURVEY 8 1/2" CURVE F/ 7914' TO 7957'.

Mud Volumes						
Active Volume (bbl)	Var Active Vol (bbl)	Balance (bbl)	Tank Volume (bbl)	Additions (bbl)	Losses (bbl)	Hole Volume (bbl)
1,909.2	957.7	894.5	1,388.0	68.9	5.7	521.2

Time Log						
Start Time	End Time	Dur (hr)	Phase	Ops Code	Sub Code	Time Code
06:00	08:00	2.00	12IHC, Int Hole Csg	TP	b	O
08:00	13:00	5.00	12IHC, Int Hole Csg	CI	c	O
13:00	18:00	5.00	12IHC, Int Hole Csg	TP	a	O
18:00	20:30	2.50	12IHC, Int Hole Csg	RM	a	O
20:30	21:00	0.50	12IHC, Int Hole Csg	RM	b	O
21:00	21:30	0.50	12IHC, Int Hole Csg	OT	e	O
21:30	22:00	0.50	12IHC, Int Hole Csg	TP	a	O
22:00	00:30	2.50	12IHC, Int Hole Csg	CI	c	O
00:30	01:30	1.00	12IHC, Int Hole Csg	TP	a	O
01:30	04:00	2.50	22PHCD, Prod Hole Curve Drill	DR	a	O
04:00	06:00	2.00	22PHCD, Prod Hole Curve Drill	DR	b	O

Mud Checks						
Time 05:00	Type INVERMUL	Depth (ftKB) 7,805.0	Density (kg/m³) (lb/g... 9.30	Funnel Viscosity (s/qt) 80	PV Calc (cP) 13.0	YP Calc (lb/100ft²) 9.004
Gel 10 sec (kPa) (lb... 14.006	Gell 10 min (kPa) (l... 19.008	Gel 30 min (kPa) (lb... 26.011	Filtrate (mL/30min) 22,000.000	Filter Cake (1/32") 22,000.000	pH	Solids (%) 8.0
MBT (lb/bbl)	Percent Oil (%) 69.0	Percent Water (%) 23.0	Chlorides (kg/m³) (... 45,000.000	Calcium (kg/m³) (m... 22,000.000	Potassium (mg/L) 680.0	Electric Stab (V) 680.0

Mud Volumes			
Tank/Addition/Loss	Type	Volume (bbl)	Subtype
Addition	Water	63.2	
Hole	Hole	521.2	
Tank	Reserve	909.0	
Loss	SURFACE EQUIPMENT	5.7	
Tank	TOTAL CIRC		
Tank	INVERMUL	479.0	
Addition	CHEMICALS	5.7	
Loss	MISC. OTHER		

Drill Strings			
BHA #4, Curve			
Bit Run 1	Drill Bit 8 1/2in, MMD55DM, 12897412	IADC Bit Dull -----	TFA (incl Noz) (in²) 1.86
Nozzles (1/32") 22/22/22/22/22	BHA Length (ft) 12,129.63	String Wt (1000lb) 34.2	Bit ROP (ft/hr)

AFE Number DD.17.30779.CAP.DRL	AFE+Supp Amt (Cost) 2,177,000.00
Day Total (Cost) 67,264	Cum To Date (Cost) 1,157,996
Mud Field Est (Cost) 2,197	Cum Mud Field Est (Co... 47,164
Start Depth (ftKB) 7,803.0	End Depth (ftKB) 7,957.0
Planned Formation WOLFCAMP B	Planned TMD (ftKB) 19,216.0
Last Casing String Intermediate Casing, 7,787.0ftKB	

Daily Contacts	
Job Contact	Mobile
BRIAN ALLEMAN, Engineer	214-978-8000
DAVID LANKFORD, Foreman	281-220-5828
KEVIN GOTTE, Consultant	281-220-5828
TRAVIS PERSCHE, Rig Clerk/Logistics	281-220-5829

Personnel Log	
Head Count	23.0

Rigs	
HELMERICH & PAYNE DRILLING, 3	
Contractor HELMERICH & PAYNE DRILLING	Rig Number 394
Rig Supervisor JARED CARPENTER, Toolpusher	Phone Mobile 918-936-7394

1, Gardner-Denver, PZ-11		
Pump Number 1	Pwr (hp) 1,300.0	Rod Diameter... 5
Liner Size (in) 5	Stroke (in) 11.00	Vol/Stk OR (b... 0.067
P (psi) 2,586.0	Slow Spd No	Strokes (s... 103
		Eff (%) 95

2, Gardner-Denver, PZ-11		
Pump Number 2	Pwr (hp) 1,300.0	Rod Diameter... 5
Liner Size (in) 5	Stroke (in) 11.00	Vol/Stk OR (b... 0.067
P (psi) 2,586.0	Slow Spd No	Strokes (s... 102
		Eff (%) 95

Mud Additive Amounts		
Mud Additive Description	Field Est (Cost/unit)	Consumed
12 HR MUD ENGINEER	700.00	1.0
CALCIUM CHL 95 -98%	17.10	10.0
DRILTREAT	97.02	1.0
INVERMUL	558.60	1.0
LIME	6.00	40.0
PALLETS	10.00	8.0
TRANSPORTATI ON	1.00	350.0

Job Supplies		
Supply Item Description DIESEL FOR OBM	Unit Label Gal	
Total Received 8,884.6	Total Consumed 0.0	On Loc 8,884.6
Supply Item Description DRILLING CUTTINGS	Unit Label Cu. Yds	
Total Received 0.0	Total Consumed 0.0	On Loc 0.0



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/15/2017
Report #: 13.0, DFS: 11.48
Time Log DFS: 11.48
Depth Progress: 154.00

Mud Motors

Motor Bend 2.00 FIXED	Bit to Bend 4.06	Rotor Nozzle Diameter (in)
--------------------------	---------------------	----------------------------

Drill String Components

Item Des	Manual/Tally Jts	OD (in)	ID (in)	Len (ft)	Top Thread
HWDP	21	5	3.00	664.93	IF
Drill Pipe	306	5	4.28	9,638.80	IF
Agitator		6 7/8	2.44	23.43	IF
Drill Pipe	54	5	4.28	1,702.49	IF
Drill Collar - Non Mag		6 1/2	3.25	30.02	IF
Non-Mag Hangoff Sub		6 1/2	3.25	5.46	IF
Drill Collar - Non Mag		6 1/2	3.25	29.67	IF
Mud Motor - Bent Housing		6 1/2	2.50	33.83	IF

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 7,803.0	End Depth (ftKB) 7,914.0	Cum Depth (ft) 111.00	Drilling Time (hr) 2.50	Cum Drill Time (hr) 2.50	Interval ROP (ft/hr) 44.4	Flow Rate (gpm) 546
WOB (1000lbf) 29	Rotary RPM (rpm) 70	SPP (psi) 2,729.0	Drill Str Wt (1000... 205	PU Str Wt (1000lbf) 220	SO Str Wt (1000lbf) 195	Drilling Torque 10.0	Off Btm Tq
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) 22.6	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.4	Bit Pressure Drop (psi) 71.1	% P @ bit (%) 3
Max Casing AV (ft/min) 434.6	Max Open Hole AV (ft/min) 124.1	Min Casing AV (ft/min) 97.9	Min Open Hole AV (ft/min) 107.0	ECD End (lb/gal) 8.86
Error				

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 7,914.0	End Depth (ftKB) 7,957.0	Cum Depth (ft) 154.00	Drilling Time (hr) 2.00	Cum Drill Time (hr) 4.50	Interval ROP (ft/hr) 21.5	Flow Rate (gpm) 546
WOB (1000lbf) 10	Rotary RPM (rpm) 0	SPP (psi) 2,606.0	Drill Str Wt (1000... 205	PU Str Wt (1000lbf) 220	SO Str Wt (1000lbf) 195	Drilling Torque 0.0	Off Btm Tq
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) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.4	Bit Pressure Drop (psi) 75.1	% P @ bit (%) 3
Max Casing AV (ft/min) 434.6	Max Open Hole AV (ft/min) 124.1	Min Casing AV (ft/min) 97.9	Min Open Hole AV (ft/min) 107.0	ECD End (lb/gal) 9.46
Error				

Kicks

Kick Date	Kick Depth (ftKB)	Control Date	Control Depth (ftKB)	Kick Class
-----------	-------------------	--------------	----------------------	------------

Kill Notes

Lost Circulation

Start Date 6/3/2017 20:30	Top Depth (ftKB) 192.0	Bottom Depth (ftKB)	Ops In Prog	Vol Lost Tot (bbl)	End Date
------------------------------	---------------------------	---------------------	-------------	--------------------	----------

Interval Problems

Problem Type	Problem Subtype	Start Date	Start Depth (ftKB)	End Depth (ftKB)	Est Cost (Cost)	Est Lost Time (hr)
--------------	-----------------	------------	--------------------	------------------	-----------------	--------------------

Action Taken

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 6/4/2017	OD (in) 13 3/8	Set Depth (ft... 684.0	Set Depth (T... 684.0	Comment	MACP Press... 500.0
Test Date 6/8/2017	Test Type Casing Test	Fluid Density (lb/gal) 9.10	EMW (lb/gal) 23.17		

Job Supplies

Supply Item Description DRILLING WATER		Unit Label Bbl
Total Received 346.0	Total Consumed 346.0	On Loc 0.0

Supply Item Description DRILLING WATER		Unit Label Bbl
Total Received 9,718.0	Total Consumed 9,718.0	On Loc 0.0

Supply Item Description		Unit Label
FUEL		Gal
Total Received	Total Consumed	On Loc
23,936.5	17,187.5	6,749.0

Supply Item Description		Unit Label
LIQUID DRILLING WASTE		Bbl
Total Received	Total Consumed	On Loc
290.0	290.0	0.0

Supply Item Description POTABLE WATER		Unit Label Gal
Total Received 13,300.0	Total Consumed 13,300.0	On Loc 0.0

Supply Item Description SEWAGE		Unit Label Gal
Total Received 18,400.0	Total Consumed 18,400.0	On Loc 0.0

Supply Item Description THREAD PROTECTORS		Unit Label Box
Total Received 0.0	Total Consumed 0.0	On Loc 0.0

Supply Item Description TRASH/GENERAL WASTE		Unit Label Ea
Total Received 0.0	Total Consumed 0.0	On Loc 0.0

Safety Checks

Time	Type	Safety Topic
17:30	Pre-Tour	DISPLACING WITH OBM
05:30	Pre-Tour	HOUSE KEEPING

Wellbores

Wellbore Name
UNIVERSITY 3-35 #102HB

Kick Offs & Key Depths

Type	Top Depth (ftKB)
------	------------------



Partner Drilling Report

Report Date: 6/15/2017
Report #: 13.0, DFS: 11.48
Time Log DFS: 11.48
Depth Progress: 154.00

Well Name: UNIVERSITY 3-35 #102HB

Leak Off and Formation Integrity Tests

Run Date 6/12/2017	OD (in) 9 5/8	Set Depth (ft... 7,787.0	Set Depth (T... 7,781.9	Comment 9 5/8" INTERMEDIATE CASING TEST ABOVE DV TOOL.	MACP Press... 1,500.0
Test Date 6/13/2017		Test Type Casing Test		Fluid Density (lb/gal) 8.80	EMW (lb/gal)
Run Date 6/12/2017	OD (in) 9 5/8	Set Depth (ft... 7,787.0	Set Depth (T... 7,781.9	Comment 9 5/8" INTERMEDIATE CASING TEST ABOVE SHOE TRACK.	MACP Press... 1,500.0
Test Date 6/13/2017		Test Type Casing Test		Fluid Density (lb/gal) 8.80	EMW (lb/gal)
Run Date 6/12/2017	OD (in) 9 5/8	Set Depth (ft... 7,787.0	Set Depth (T... 7,781.9	Comment PERFORM F.I.T. AS FOLLOWS: MW USED WBM @ 8.6 PPG. PUMPED 12.5 BBLS @ .5 BPM. PRESSURE UP TO 975 PSI 11.0 PPG EMW. HELD FOR 5 MINUTES.	MACP Press... 986.0
Test Date 6/13/2017		Test Type F.I.T.		Fluid Density (lb/gal) 8.60	EMW (lb/gal) 11.03

Survey Data

MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
7,849.00	1.35	31.32	7,843.89	-63.07	-62.25	-138.66	0.28
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
7,957.00	7.97	7.16	7,951.48	-54.53	-53.72	-137.06	6.26