



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #104HB

Report Date: 8/3/2017
 Report #: 25.0, DFS: 14.29
 Time Log DFS: 14.29
 Depth Progress: 1,514.00

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 7/19/2017		Weather CLEAR		Temperature (°F) 70.0		Road Condition GOOD	
Original Spud/Spud Rig Date 7/19/2017		Weather CLEAR		Temperature (°F) 70.0		Hole Condition GOOD	
Current Status/OART FLOW CHECK @ REPORT TIME				24 Hour Forecast PUMP SLUG AND POOH LAYING DOWN 5" DRILL PIPE (PERFORM CAT 4 INSPECTION WHILE LAYING DOWN DRILL PIPE). LAY DOWN DIRECTIONAL BHA. R/U CASING EQUIPMENT AND RUN 5 1/2" PRODUCTION CASING.			

Short Report
 DRILL AND SURVEY 8 1/2" PRODUCTION LATERAL F/ 17705' TO 18261'. CHANGE OUT SWAP IN MP #1. DRILL AND SURVEY 8 1/2" PRODUCTION LATERAL F/ 18261' TO 19219'. TD WELL @ 19219'. CIRCULATE AND CONDITION HOLE.

Mud Volumes						
Active Volume (bbl)	Var Active Vol (bbl)	Balance (bbl)	Tank Volume (bbl)	Additions (bbl)	Losses (bbl)	Hole Volume (bbl)
2,151.0	-2,693.3	-2,745.4	911.0	168.9	116.8	1,240.0

Time Log							Operation Summary
Start Time	End Time	Dur (hr)	Phase	Ops Code	Sub Code	Time Code	
06:00	13:00	7.00	23PHLD, Prod Hole Lat Drill	DR	c	O	ROTATE / SLIDE DRLG IN LATERAL PRODUCTION SECTION F/17705' TO 18261' 556' @ 79 FPH AVG ROP NOTE: PUMPING 20 BBL 10.5 PPG LCM SWEEPS EVERY 300 FT.
13:00	14:30	1.50	23PHLD, Prod Hole Lat Drill	TR	r	O	C/O SWAB AND LINER ON MP#1 / POD #3.
14:30	00:30	10.00	23PHLD, Prod Hole Lat Drill	DR	c	O	ROTATE / SLIDE DRLG IN LATERAL PRODUCTION SECTION F/18261' TO 19219'. 958' @ 95.8 FPH AVG ROP TD WELL @ 19219', INC 91.88°, AZ 357.18°, TVD 8482.36'. NOTE: PUMPING 20 BBL 10.5 PPG LCM SWEEPS EVERY 300 FT.
00:30	06:00	5.50	24PHC, Prod Hole Csg	Cl	g	O	PUMP 1 - 40 BBL WEIGHTED SWEEP, 1 - 30 BBL HI-VIS SWEEP, 1 - 60 BBL HI-VIS / LCM SWEEP

Mud Checks						
Time	Type	Depth (ftKB)	Density (kg/m³) (lb/g...)	Funnel Viscosity (s/qt)	PV Calc (cP)	YP Calc (lb/100ft²)
09:00	INVERMUL	17,980.0	9.00	55	14.0	12.005
Gel 10 sec (kPa) (lb...)	Gell 10 min (kPa) (l...	Gel 30 min (kPa) (lb...	Filtrate (mL/30min)	Filter Cake (1/32")	pH	Solids (%)
12.005	17.007	21.009				10.0
MBT (lb/bbl)	Percent Oil (%)	Percent Water (%)	Chlorides (kg/m³) (...)	Calcium (kg/m³) (m...	Potassium (mg/L)	Electric Stab (V)
	68.0	22.0	37,000.000	15,000.000		600.0
Time	Type	Depth (ftKB)	Density (kg/m³) (lb/g...)	Funnel Viscosity (s/qt)	PV Calc (cP)	YP Calc (lb/100ft²)
01:00	INVERMUL	18,785.0	9.10	55	14.0	13.005
Gel 10 sec (kPa) (lb...)	Gell 10 min (kPa) (l...	Gel 30 min (kPa) (lb...	Filtrate (mL/30min)	Filter Cake (1/32")	pH	Solids (%)
12.005	17.007	22.009				10.5
MBT (lb/bbl)	Percent Oil (%)	Percent Water (%)	Chlorides (kg/m³) (...)	Calcium (kg/m³) (m...	Potassium (mg/L)	Electric Stab (V)
	71.0	18.5	40,000.000	21,000.000		650.0

Mud Volumes			
Tank/Addition/Loss	Type	Volume (bbl)	Subtype
Hole	ANNULUS	907.8	
Hole	PIPE CAP	332.2	
Hole	TOTAL HOLE	1,240.0	
Tank	ACTIVE PITS	450.0	
Hole	TOTAL CIRC.	1,690.0	
Tank	RESERVE	461.0	
Addition	BASE	104.8	
Addition	DRILL WATER	25.0	
Addition	BARITE	9.7	
Addition	CHEMICALS	29.4	
Loss	SCE	116.8	

AFE Number DD.17.30781.CAP.DRL	AFE+Supp Amt (Cost) 2,331,000.00
Day Total (Cost) 78,365	Cum To Date (Cost) 1,619,617
Mud Field Est (Cost) 11,488	Cum Mud Field Est (Co... 91,783
Start Depth (ftKB) 17,705.0	End Depth (ftKB) 19,219.0
Planned Formation WOLFCAMP B	Planned TMD (ftKB) 19,337.0
Last Casing String Intermediate Casing, 5,058.0ftKB	

Daily Contacts	
Job Contact	Mobile
BRIAN ALLEMAN, Engineer	214-978-8000
CHRISTOPHER ABSHIRE, Foreman	281-220-5828
KEVIN GOTTE, Consultant	281-220-5828
DEAN DUFFY, 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 THOMAS PENDERGRASS, Toolpusher	Phone Mobile
1, Gardner-Denver, PZ-11	
Pump Number 1	Pwr (hp) 1,300.0
Rod Diameter...	
Liner Size (in) 5	Stroke (in) 11.00
Vol/Stk OR (b...)	
P (psi) 2,958.0	Slow Spd No
Strokes (s...)	Eff (%) 95

2, Gardner-Denver, PZ-11	
Pump Number 2	Pwr (hp) 1,300.0
Rod Diameter...	
Liner Size (in) 5	Stroke (in) 11.00
Vol/Stk OR (b...)	
P (psi) 2,958.0	Slow Spd No
Strokes (s...)	Eff (%) 95

Mud Additive Amounts		
Mud Additive Description	Field Est (Cost/unit)	Consumed
12 HR MUD ENGINEER	700.00	1.0
BARABLOK 400	85.00	7.0
BARACARB 150	13.30	17.0
BARACARB 50	13.30	21.0
BAROID (BULK)	205.00	7.0
BARO-TROL PLUS	77.97	19.0
CALCIUM CHL 95 -98%	17.10	73.0
DRILTREAT	97.02	3.0
GELTONE V	65.00	20.0
LIME	6.00	80.0
STOPPIT	40.00	36.0
SUSPENTONE	134.10	15.0

Job Supplies		
Supply Item Description	Unit Label	Gal
DIESEL FOR OBM		
Total Received	Total Consumed	On Loc
49,969.0	42,374.0	7,595.0



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Depth Progress: 1,514.00

Mud Volumes			
Tank/Addition/Loss	Type	Volume (bbl)	Subtype
Loss	DOWNHOLE		
Loss	MISC OTHER		

Drill Strings			
BHA #6, Curve			
Bit Run	Drill Bit	IADC Bit Dull	TFA (incl Noz) (in ²)
1	8 1/2in, MMD55DM, 1287411	-----	1.86
Nozzles (1/32")		BHA Length (ft)	String Wt (1000lbf)
22/22/22/22/22		12,105.26	90.3

Mud Motors		
Motor Bend	Bit to Bend	Rotor Nozzle Diameter (in)
2.00 FIXED	4.05	

Drill String Components						
Item Des	Manual/Tally Jts	OD (in)	ID (in)	Len (ft)	Top Thread	
HWDP	21	5	3.00	639.59	IF	
Drill Pipe	306	5	4.28	9,638.80	IF	
Agitator	1	6 9/16	2.50	23.78	IF	
Drill Pipe	54	5	4.28	1,702.49	IF	
Drill Collar - Non Mag	1	6 1/2	3.25	30.67	IF	
Non-Mag Hangoff Sub	1	6 1/2	3.25	5.45	IF	
Drill Collar - Non Mag	1	6 1/2	3.25	30.72	IF	
Mud Motor - Bent Housing	1	6 1/2	2.50	33.76	IF	

Drilling Parameters							
Wellbore	Start Depth (ftKB)	End Depth (ftKB)	Cum Depth (ft)	Drilling Time (hr)	Cum Drill Time (hr)	Interval ROP (ft/hr)	Flow Rate (gpm)
UNIVERSITY 3-35 #104HB	17,705.0	17,973.0	9,628.00	2.35	104.19	114.0	555
WOB (1000lbf)	Rotary RPM (rpm)	SPP (psi)	Drill Str Wt (1000...)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque	Off Btm Tq
30	70	3,939.0	220	240	225	18.0	
Q Gas Inj (ft ³ /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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)	Error
24.3	0.4	95.9	75.0	2	
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)	
256.8	466.1	99.4	108.8	9.48	

Drilling Parameters							
Wellbore	Start Depth (ftKB)	End Depth (ftKB)	Cum Depth (ft)	Drilling Time (hr)	Cum Drill Time (hr)	Interval ROP (ft/hr)	Flow Rate (gpm)
UNIVERSITY 3-35 #104HB	17,973.0	17,991.0	9,646.00	1.17	105.36	15.4	555
WOB (1000lbf)	Rotary RPM (rpm)	SPP (psi)	Drill Str Wt (1000...)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque	Off Btm Tq
17	0	3,661.0	220	240	225	0.0	0.0
Q Gas Inj (ft ³ /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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)	Error
24.3	0.4	95.9	75.0	2	
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)	
256.8	466.1	99.4	108.8	9.47	

Drilling Parameters							
Wellbore	Start Depth (ftKB)	End Depth (ftKB)	Cum Depth (ft)	Drilling Time (hr)	Cum Drill Time (hr)	Interval ROP (ft/hr)	Flow Rate (gpm)
UNIVERSITY 3-35 #104HB	17,991.0	18,065.0	9,720.00	0.78	106.14	94.9	555
WOB (1000lbf)	Rotary RPM (rpm)	SPP (psi)	Drill Str Wt (1000...)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque	Off Btm Tq
24	70	3,902.0	220	254	225	18.0	
Q Gas Inj (ft ³ /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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)	Error
24.3	0.4	95.9	75.0	2	
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)	
256.8	466.1	99.4	108.8	9.47	

Job Supplies		
Supply Item Description	Unit Label	
DRILLING CUTTINGS	Cu. Yds	
Total Received	Total Consumed	On Loc
465.0	465.0	0.0

Supply Item Description	Unit Label	
DRILLING WATER	Bbl	
Total Received	Total Consumed	On Loc
5,994.6	5,994.6	0.0

Supply Item Description	Unit Label	
FUEL	Gal	
Total Received	Total Consumed	On Loc
52,682.0	29,602.0	11,282.0

Supply Item Description	Unit Label	
LIQUID DRILLING WASTE	Bbl	
Total Received	Total Consumed	On Loc
460.0	460.0	0.0

Supply Item Description	Unit Label	
POTABLE WATER	Gal	
Total Received	Total Consumed	On Loc
31,800.0	31,800.0	0.0

Supply Item Description	Unit Label	
SEWAGE	Gal	
Total Received	Total Consumed	On Loc
23,400.0	23,400.0	0.0

Supply Item Description	Unit Label	
THREAD PROTECTORS	Box	
Total Received	Total Consumed	On Loc
1.0	1.0	0.0

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

Safety Checks		
Time	Type	Safety Topic
17:30	Pre-Tour	HAND AND FEET PLACEMENT
05:30	Pre-Tour	LAYING DOWN DRILL PIPE

Wellbores	
Wellbore Name	
UNIVERSITY 3-35 #104HB	
Kick Offs & Key Depths	
Type	Top Depth (ftKB)



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Report Date: 8/3/2017
 Report #: 25.0, DFS: 14.29
 Time Log DFS: 14.29
 Depth Progress: 1,514.00

Well Name: UNIVERSITY 3-35 #104HB

Drilling Parameters							
Wellbore UNIVERSITY 3-35 #104HB	Start Depth (ftKB) 18,065.0	End Depth (ftKB) 18,083.0	Cum Depth (ft) 9,738.00	Drilling Time (hr) 1.27	Cum Drill Time (hr) 107.41	Interval ROP (ft/hr) 14.2	Flow Rate (gpm) 555
WOB (1000lbf) 16	Rotary RPM (rpm) 0	SPP (psi) 3,632.0	Drill Str Wt (1000...) 220	PU Str Wt (1000lbf) 254	SO Str Wt (1000lbf) 225	Drilling Torque 0.0	Off Btm Tq 0.0
Q Gas Inj (ft ³ /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) 24.3	HP/Area (hp/in ²) 0.4	Bit Jet Velocity (ft/s) 95.9	Bit Pressure Drop (psi) 75.0	% P @ bit (%) 2
Max Casing AV (ft/min) 256.8	Max Open Hole AV (ft/min) 466.1	Min Casing AV (ft/min) 99.4	Min Open Hole AV (ft/min) 108.8	ECD End (lb/gal) 9.47

Error							
Wellbore UNIVERSITY 3-35 #104HB	Start Depth (ftKB) 18,083.0	End Depth (ftKB) 18,350.0	Cum Depth (ft) 10,005.00	Drilling Time (hr) 4.07	Cum Drill Time (hr) 111.48	Interval ROP (ft/hr) 65.6	Flow Rate (gpm) 555
WOB (1000lbf) 32	Rotary RPM (rpm) 70	SPP (psi) 3,916.0	Drill Str Wt (1000...) 186	PU Str Wt (1000lbf) 221	SO Str Wt (1000lbf) 190	Drilling Torque 0.0	Off Btm Tq 18.0
Q Gas Inj (ft ³ /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) 24.3	HP/Area (hp/in ²) 0.4	Bit Jet Velocity (ft/s) 95.9	Bit Pressure Drop (psi) 75.0	% P @ bit (%) 2
Max Casing AV (ft/min) 256.8	Max Open Hole AV (ft/min) 466.1	Min Casing AV (ft/min) 99.4	Min Open Hole AV (ft/min) 108.8	ECD End (lb/gal) 9.48

Error							
Wellbore UNIVERSITY 3-35 #104HB	Start Depth (ftKB) 18,350.0	End Depth (ftKB) 18,368.0	Cum Depth (ft) 10,023.00	Drilling Time (hr) 1.17	Cum Drill Time (hr) 112.65	Interval ROP (ft/hr) 15.4	Flow Rate (gpm) 555
WOB (1000lbf) 23	Rotary RPM (rpm) 0	SPP (psi) 3,814.0	Drill Str Wt (1000...) 186	PU Str Wt (1000lbf) 221	SO Str Wt (1000lbf) 190	Drilling Torque 0.0	Off Btm Tq 0.0
Q Gas Inj (ft ³ /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) 24.3	HP/Area (hp/in ²) 0.4	Bit Jet Velocity (ft/s) 95.9	Bit Pressure Drop (psi) 75.0	% P @ bit (%) 2
Max Casing AV (ft/min) 256.8	Max Open Hole AV (ft/min) 466.1	Min Casing AV (ft/min) 99.4	Min Open Hole AV (ft/min) 108.8	ECD End (lb/gal) 9.48

Error							
Wellbore UNIVERSITY 3-35 #104HB	Start Depth (ftKB) 18,368.0	End Depth (ftKB) 18,728.0	Cum Depth (ft) 10,383.00	Drilling Time (hr) 3.15	Cum Drill Time (hr) 115.80	Interval ROP (ft/hr) 114.3	Flow Rate (gpm) 555
WOB (1000lbf) 36	Rotary RPM (rpm) 70	SPP (psi) 4,056.0	Drill Str Wt (1000...) 186	PU Str Wt (1000lbf) 221	SO Str Wt (1000lbf) 190	Drilling Torque 0.0	Off Btm Tq 20.0
Q Gas Inj (ft ³ /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) 24.3	HP/Area (hp/in ²) 0.4	Bit Jet Velocity (ft/s) 95.9	Bit Pressure Drop (psi) 75.0	% P @ bit (%) 2
Max Casing AV (ft/min) 256.8	Max Open Hole AV (ft/min) 466.1	Min Casing AV (ft/min) 99.4	Min Open Hole AV (ft/min) 108.8	ECD End (lb/gal) 9.49

Error							
Wellbore UNIVERSITY 3-35 #104HB	Start Depth (ftKB) 18,728.0	End Depth (ftKB) 18,743.0	Cum Depth (ft) 10,398.00	Drilling Time (hr) 0.80	Cum Drill Time (hr) 116.60	Interval ROP (ft/hr) 18.8	Flow Rate (gpm) 555
WOB (1000lbf) 18	Rotary RPM (rpm) 0	SPP (psi) 3,715.0	Drill Str Wt (1000...) 161	PU Str Wt (1000lbf) 242	SO Str Wt (1000lbf) 207	Drilling Torque 0.0	Off Btm Tq 0.0
Q Gas Inj (ft ³ /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) 24.3	HP/Area (hp/in ²) 0.4	Bit Jet Velocity (ft/s) 95.9	Bit Pressure Drop (psi) 75.0	% P @ bit (%) 2
Max Casing AV (ft/min) 256.8	Max Open Hole AV (ft/min) 466.1	Min Casing AV (ft/min) 99.4	Min Open Hole AV (ft/min) 108.8	ECD End (lb/gal) 9.49

Error							
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Partner Drilling Report

Report Date: 8/3/2017
Report #: 25.0, DFS: 14.29
Time Log DFS: 14.29
Depth Progress: 1,514.00

Well Name: UNIVERSITY 3-35 #104HB

Drilling Parameters							
Wellbore UNIVERSITY 3-35 #104HB	Start Depth (ftKB) 18,743.0	End Depth (ftKB) 19,219.0	Cum Depth (ft) 10,874.00	Drilling Time (hr) 3.88	Cum Drill Time (hr) 120.48	Interval ROP (ft/hr) 122.7	Flow Rate (gpm) 555
WOB (1000lbf) 32	Rotary RPM (rpm) 70	SPP (psi) 4,150.0	Drill Str Wt (1000...) 185	PU Str Wt (1000lbf) 171	SO Str Wt (1000lbf) 162	Drilling Torque	Off Btm Tq 21.0
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) 24.3	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 95.9	Bit Pressure Drop (psi) 75.0	% P @ bit (%) 2			
Max Casing AV (ft/min) 256.8	Max Open Hole AV (ft/min) 466.1	Min Casing AV (ft/min) 99.4	Min Open Hole AV (ft/min) 108.8	ECD End (lb/gal) 9.50			
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		
Interval Problems							
Problem Type Other	Problem Subtype C/O SWAB ON MP #2 POD #1	Start Date 8/2/2017	Start Depth (ftKB) 17,203.0	End Depth (ftKB) 17,203.0	Est Cost (Cost)	Est Lost Time (hr)	
Action Taken C/O SWAB ON MP #2 POD #3							
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 7/20/2017	OD (in) 13 3/8	Set Depth (ft...) 1,461.0	Set Depth (T...) 1,460.8	Comment TEST ON CHART: GOOD TEST			MACP Press... 500.0
Test Date 7/21/2017	Test Type Casing Test			Fluid Density (lb/gal) 8.30	EMW (lb/gal) 14.80		
Run Date 7/24/2017	OD (in) 9 5/8	Set Depth (ft...) 5,058.0	Set Depth (T...) 4,973.3	Comment TEST ON CHART: GOOD TEST			MACP Press... 1,500.0
Test Date 7/25/2017	Test Type Casing Test			Fluid Density (lb/gal) 9.90	EMW (lb/gal) 15.71		
Run Date 7/24/2017	OD (in) 9 5/8	Set Depth (ft...) 5,058.0	Set Depth (T...) 4,973.3	Comment TEST ON CHART: GOOD TEST			MACP Press... 96.0
Test Date 7/26/2017	Test Type F.I.T.			Fluid Density (lb/gal) 9.90	EMW (lb/gal) 10.27		
Survey Data							
MD (ftKB) 17,717.00	Inclination (°) 88.99	Azimuth (°) 0.10	TVD (ftKB) 8,471.43	VS (ft) 9,423.07	NS (ft) 9,356.18	EW (ft) 1,131.27	DLS (°/100ft) 0.78
MD (ftKB) 17,811.00	Inclination (°) 89.50	Azimuth (°) 359.36	TVD (ftKB) 8,472.66	VS (ft) 9,516.51	NS (ft) 9,450.17	EW (ft) 1,130.82	DLS (°/100ft) 0.96
MD (ftKB) 17,906.00	Inclination (°) 91.07	Azimuth (°) 359.19	TVD (ftKB) 8,472.19	VS (ft) 9,610.86	NS (ft) 9,545.16	EW (ft) 1,129.62	DLS (°/100ft) 1.66
MD (ftKB) 18,000.00	Inclination (°) 90.87	Azimuth (°) 0.61	TVD (ftKB) 8,470.60	VS (ft) 9,704.32	NS (ft) 9,639.14	EW (ft) 1,129.46	DLS (°/100ft) 1.53
MD (ftKB) 18,095.00	Inclination (°) 88.99	Azimuth (°) 1.68	TVD (ftKB) 8,470.72	VS (ft) 9,798.98	NS (ft) 9,734.12	EW (ft) 1,131.36	DLS (°/100ft) 2.28
MD (ftKB) 18,189.00	Inclination (°) 89.19	Azimuth (°) 1.76	TVD (ftKB) 8,472.21	VS (ft) 9,892.71	NS (ft) 9,828.06	EW (ft) 1,134.18	DLS (°/100ft) 0.23
MD (ftKB) 18,284.00	Inclination (°) 89.87	Azimuth (°) 1.08	TVD (ftKB) 8,472.99	VS (ft) 9,987.40	NS (ft) 9,923.03	EW (ft) 1,136.53	DLS (°/100ft) 1.01
MD (ftKB) 18,378.00	Inclination (°) 88.19	Azimuth (°) 1.33	TVD (ftKB) 8,474.58	VS (ft) 10,081.06	NS (ft) 10,016.99	EW (ft) 1,138.51	DLS (°/100ft) 1.81
MD (ftKB) 18,473.00	Inclination (°) 88.62	Azimuth (°) 0.10	TVD (ftKB) 8,477.22	VS (ft) 10,175.63	NS (ft) 10,111.95	EW (ft) 1,139.69	DLS (°/100ft) 1.37
MD (ftKB) 18,567.00	Inclination (°) 88.56	Azimuth (°) 359.05	TVD (ftKB) 8,479.54	VS (ft) 10,269.01	NS (ft) 10,205.91	EW (ft) 1,139.00	DLS (°/100ft) 1.12
MD (ftKB) 18,662.00	Inclination (°) 88.25	Azimuth (°) 358.20	TVD (ftKB) 8,482.18	VS (ft) 10,363.20	NS (ft) 10,300.85	EW (ft) 1,136.72	DLS (°/100ft) 0.95



Partner Drilling Report

Report Date: 8/3/2017
Report #: 25.0, DFS: 14.29
Time Log DFS: 14.29
Depth Progress: 1,514.00

Well Name: UNIVERSITY 3-35 #104HB

Survey Data							
MD (ftKB) 18,756.00	Inclination (°) 89.19	Azimuth (°) 0.25	TVD (ftKB) 8,484.28	VS (ft) 10,456.52	NS (ft) 10,394.81	EW (ft) 1,135.45	DLS (°/100ft) 2.40
MD (ftKB) 18,851.00	Inclination (°) 89.66	Azimuth (°) 0.08	TVD (ftKB) 8,485.24	VS (ft) 10,551.03	NS (ft) 10,489.81	EW (ft) 1,135.72	DLS (°/100ft) 0.53
MD (ftKB) 18,945.00	Inclination (°) 89.36	Azimuth (°) 358.80	TVD (ftKB) 8,486.04	VS (ft) 10,644.42	NS (ft) 10,583.80	EW (ft) 1,134.80	DLS (°/100ft) 1.40
MD (ftKB) 19,039.00	Inclination (°) 90.13	Azimuth (°) 357.69	TVD (ftKB) 8,486.46	VS (ft) 10,737.56	NS (ft) 10,677.75	EW (ft) 1,131.92	DLS (°/100ft) 1.44
MD (ftKB) 19,134.00	Inclination (°) 91.54	Azimuth (°) 357.07	TVD (ftKB) 8,485.07	VS (ft) 10,831.49	NS (ft) 10,772.64	EW (ft) 1,127.58	DLS (°/100ft) 1.62
MD (ftKB) 19,163.00	Inclination (°) 91.88	Azimuth (°) 357.18	TVD (ftKB) 8,484.21	VS (ft) 10,860.13	NS (ft) 10,801.59	EW (ft) 1,126.13	DLS (°/100ft) 1.23
MD (ftKB) 19,219.00	Inclination (°) 91.88	Azimuth (°) 357.18	TVD (ftKB) 8,482.37	VS (ft) 10,915.44	NS (ft) 10,857.49	EW (ft) 1,123.37	DLS (°/100ft) 0.00



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #104HB

Report Date: 8/4/2017
 Report #: 26.0, DFS: 15.29
 Time Log DFS: 15.29
 Depth Progress: 0.00

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 7/19/2017		Weather CLEAR		Temperature (°F) 75.0		Road Condition GOOD	
Original Spud/Spud Rig Date 7/19/2017		Weather CLEAR		Temperature (°F) 75.0		Hole Condition GOOD	
Current Status/OART POOH LAYING DOWN DRILL PIPE @ REPORT TIME				24 Hour Forecast FINISH LAYING DOWN DRILL PIPE. LAY DOWN DIRECTIONAL TOOLS AND PULL WEAR BUSHING. R/U CASING EQUIPMENT AND RUN 5 1/2" PRODUCTION CASING.			

Short Report
 FLOW CHECK AND PUMP SLUG. POOH 5 STANDS F/ 19219' TO 18700' AND BEGAN LAYING DOWN DRILL PIPE F/ 18700' TO 12909'. CHANGE OUT ST-80 DYES. POOH LAYING DOWN DRILL PIPE F/ 12909' TO 1804'. TIH WITH 5 STANDS F/ 1804' TO 2354'. POOH LAYING DOWN PIPE F/ 2354' TO 504'.

Mud Volumes						
Active Volume (bbl)	Var Active Vol (bbl)	Balance (bbl)	Tank Volume (bbl)	Additions (bbl)	Losses (bbl)	Hole Volume (bbl)
2,081.3	-69.7	0.1	742.0	14.3	84.1	1,339.3

Time Log							Operation Summary
Start Time	End Time	Dur (hr)	Phase	Ops Code	Sub Code	Time Code	
06:00	06:30	0.50	24PHC, Prod Hole Csg	Cl	h	O	FLOW CHECK AND PUMP SLUG.
06:30	07:15	0.75	24PHC, Prod Hole Csg	TP	c	O	POOH AND RACK BACK 5 STANDS F/ 19219' TO 18700'. NOTE: NO TIGHT SPOTS OR EXCESS DRAG.
07:15	13:15	6.00	24PHC, Prod Hole Csg	TP	c	O	POOH LAYING DOWN DRILL PIPE F/ 18700' TO 12909'. NOTE: NOTIFY TRRC WITH INTENT TO RUN AND CEMENT 5 1/2" PRODUCTION CASING. SPOKE WITH IVY. NOTE: NO TIGHT SPOTS OR EXCESS DRAG.
13:15	13:45	0.50	24PHC, Prod Hole Csg	RM	b	O	CHANGE OUT ST-80 DYES.
13:45	03:00	13.25	24PHC, Prod Hole Csg	TP	c	O	POOH LAYING DOWN DRILL PIPE F/ 12909' TO 1804'. LAY DOWN NOV AGITATOR. NOTE: USE RIG TONGS TO BREAK TIGHT CONNECTIONS. NOTE: NO TIGHT SPOTS OR EXCESS DRAG.
03:00	03:30	0.50	24PHC, Prod Hole Csg	TP	a	O	TIH WITH 5 STANDS IN THE DERRICK F/ 1804' TO 2354'.
03:30	06:00	2.50	24PHC, Prod Hole Csg	TP	c	O	POOH LAYING DOWN DRILL PIPE F/ 2354' TO 504'. NOTE: USE RIG TONGS TO BREAK TIGHT CONNECTIONS FROM 6500'.

Mud Checks						
Time	Type	Depth (ftKB)	Density (kg/m³) (lb/gal)	Funnel Viscosity (s/qt)	PV Calc (cP)	YP Calc (lb/100ft²)
10:00	INVERMUL	19,219.0	9.20	58	13.0	12.005
Gel 10 sec (kPa) (lb...)	Gell 10 min (kPa) (l...	Gel 30 min (kPa) (lb...	Filtrate (mL/30min)	Filter Cake (1/32")	pH	Solids (%)
11.005	16.007	20.008				10.8
MBT (lb/bbl)	Percent Oil (%)	Percent Water (%)	Chlorides (kg/m³) (...)	Calcium (kg/m³) (m...	Potassium (mg/L)	Electric Stab (V)
	70.2	19.0	40,000.000	21,000.000		600.0
Time	Type	Depth (ftKB)	Density (kg/m³) (lb/gal)	Funnel Viscosity (s/qt)	PV Calc (cP)	YP Calc (lb/100ft²)
01:00	INVERMUL	19,219.0	9.20	58	13.0	12.005
Gel 10 sec (kPa) (lb...)	Gell 10 min (kPa) (l...	Gel 30 min (kPa) (lb...	Filtrate (mL/30min)	Filter Cake (1/32")	pH	Solids (%)
12.005	17.007	21.009				11.0
MBT (lb/bbl)	Percent Oil (%)	Percent Water (%)	Chlorides (kg/m³) (...)	Calcium (kg/m³) (m...	Potassium (mg/L)	Electric Stab (V)
	71.0	18.0	40,000.000	21,000.000		600.0

Mud Volumes			
Tank/Addition/Loss	Type	Volume (bbl)	Subtype
Hole	ANNULUS	307.1	
Hole	PIPE CAP	104.7	
Hole	TOTAL HOLE	1,339.3	
Tank	ACTIVE PITS	412.0	
Hole	TOTAL CIRC.	823.8	
Tank	RESERVE	330.0	

AFE Number DD.17.30781.CAP.DRL	AFE+Supp Amt (Cost) 2,331,000.00
Day Total (Cost) 56,075	Cum To Date (Cost) 1,675,691
Mud Field Est (Cost) 2,965	Cum Mud Field Est (Co... 94,747
Start Depth (ftKB) 19,219.0	End Depth (ftKB) 19,219.0
Planned Formation WOLFCAMP B	Planned TMD (ftKB) 19,337.0
Last Casing String Intermediate Casing, 5,058.0ftKB	

Daily Contacts	
Job Contact	Mobile
BRIAN ALLEMAN, Engineer	214-978-8000
CHRISTOPHER ABSHIRE, Foreman	281-220-5828
KEVIN GOTTE, Consultant	281-220-5828
DEAN DUFFY, Rig Clerk/Logistics	281-220-5829

Personnel Log	
Head Count	
	22.0

Rigs	
HELMERICH & PAYNE DRILLING, 3	
Contractor HELMERICH & PAYNE DRILLING	Rig Number 394
Rig Supervisor THOMAS PENDERGRASS, Toolpusher	Phone Mobile

1, Gardner-Denver, PZ-11			
Pump Number	Pwr (hp)	Rod Diameter...	
1	1,300.0		
Line Size (in)	Stroke (in)	Vol/Stk OR (b...	
5	11.00		
P (psi)	Slow Spd	Strokes (s...	Eff (%)

2, Gardner-Denver, PZ-11			
Pump Number	Pwr (hp)	Rod Diameter...	
2	1,300.0		
Line Size (in)	Stroke (in)	Vol/Stk OR (b...	
5	11.00		
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
BAROID (BULK)	205.00	10.1
DRILTREAT	97.02	2.0

Job Supplies		
Supply Item Description	Unit Label	
DIESEL FOR OBM	Gal	
Total Received	Total Consumed	On Loc
49,969.0	42,374.0	7,595.0
Supply Item Description	Unit Label	
DRILLING CUTTINGS	Cu. Yds	
Total Received	Total Consumed	On Loc
465.0	465.0	0.0

Supply Item Description		
DRILLING WATER	Unit Label	
Total Received	Total Consumed	On Loc
5,994.6	5,994.6	0.0
Supply Item Description	Unit Label	
FUEL	Gal	
Total Received	Total Consumed	On Loc
52,682.0	29,602.0	11,282.0



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #104HB

Report Date: 8/4/2017
 Report #: 26.0, DFS: 15.29
 Time Log DFS: 15.29
 Depth Progress: 0.00

Mud Volumes			
Tank/Addition/Loss	Type	Volume (bbl)	Subtype
Addition	BASE	0.0	
Addition	DRILL WATER	0.0	
Addition	BARITE	14.1	
Addition	CHEMICALS	0.2	
Loss	SCE	50.0	
Loss	DOWNHOLE		
Loss	MISC OTHER	34.1	

Drill Strings			
BHA #<stringno>, <des>			
Bit Run	Drill Bit	IADC Bit Dull	TFA (incl Noz) (in ²)
Nozzles (1/32")		BHA Length (ft)	String Wt (1000lbf)
		Bit ROP (ft/hr)	

Drill String Components					
Item Des	Manual/Tally Jts	OD (in)	ID (in)	Len (ft)	Top Thread

Drilling Parameters							
Wellbore	Start Depth (ftKB)	End Depth (ftKB)	Cum Depth (ft)	Drilling Time (hr)	Cum Drill Time (hr)	Interval ROP (ft/hr)	Flow Rate (gpm)
WOB (1000lbf)	Rotary RPM (rpm)	SPP (psi)	Drill Str Wt (1000...)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque	Off Btm Tq
Q Gas Inj (ft ³ /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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
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)
Error				

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

Lost Circulation					
Start Date	Top Depth (ftKB)	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)

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

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...	
7/20/2017	13 3/8	1,461.0	1,460.8	TEST ON CHART: GOOD TEST	500.0	
Test Date		Test Type		Fluid Density (lb/gal)	EMW (lb/gal)	
7/21/2017		Casing Test		8.30	14.80	
Run Date	OD (in)	Set Depth (ft...)	Set Depth (T...)	Comment	MACP Press...	
7/24/2017	9 5/8	5,058.0	4,973.3	TEST ON CHART: GOOD TEST	1,500.0	
Test Date		Test Type		Fluid Density (lb/gal)	EMW (lb/gal)	
7/25/2017		Casing Test		9.90	15.71	
Run Date	OD (in)	Set Depth (ft...)	Set Depth (T...)	Comment	MACP Press...	
7/24/2017	9 5/8	5,058.0	4,973.3	TEST ON CHART: GOOD TEST	96.0	
Test Date		Test Type		Fluid Density (lb/gal)	EMW (lb/gal)	
7/26/2017		F.I.T.		9.90	10.27	

Survey Data							
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)

Job Supplies		
Supply Item Description	Unit Label	Bbl
LIQUID DRILLING WASTE		
Total Received	Total Consumed	On Loc
460.0	460.0	0.0
Supply Item Description	Unit Label	Gal
POTABLE WATER		
Total Received	Total Consumed	On Loc
31,800.0	31,800.0	0.0
Supply Item Description	Unit Label	Gal
SEWAGE		
Total Received	Total Consumed	On Loc
23,400.0	23,400.0	0.0
Supply Item Description	Unit Label	Box
THREAD PROTECTORS		
Total Received	Total Consumed	On Loc
1.0	1.0	0.0
Supply Item Description	Unit Label	Box
TRASH/GENERAL WASTE		
Total Received	Total Consumed	On Loc
0.0	0.0	0.0

Safety Checks		
Time	Type	Safety Topic
17:30	Pre-Tour	LAYING DOWN DRILL PIPE
05:30	Pre-Tour	WORKING WITH THIRD PARTY SERVICE COMPANIES

Wellbores	
Wellbore Name	
UNIVERSITY 3-35 #104HB	

Kick Offs & Key Depths	
Type	Top Depth (ftKB)