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

API/UWI No.	Surface Legal Location	Well License/Permit No.	State/Province
42461405810000	A-U47; SEC. 11; BLK 4; UL SURVEY	824982	TEXAS

Original Spud/Spud Rig Date	Rig Release Date	KB to GL (ft)	KB-Casing Flange Distance (ft)
7/19/2017 23:00		25.00	

Original Spud/Spud Rig Date	Weather	Temperature (°F)	Road Condition	Hole Condition
7/19/2017	CLEAR	70.0	GOOD	GOOD

Current Status/OART	24 Hour Forecast
FLOW CHECK @ REPORT TIME	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

Start Time	End Time	Dur (hr)	Phase	Ops Code	Sub Code	Time Code	Operation Summary
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	CI	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 (lbf/100ft²)
09:00	INVERMUL	17,980.0	9.00	55	14.0	12.005
Gel 10 sec (kPa) (lb…	Gel 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 (lbf/100ft²)
01:00	INVERMUL	18,785.0	9.10	55	14.0	13.005
Gel 10 sec (kPa) (lb…	Gel 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	AFE+Supp Amt (Cost)
DD.17.30781.CAP.DRL	2,331,000.00
Day Total (Cost)	**Cum To Date (Cost)**
78,365	1,619,617
Mud Field Est (Cost)	**Cum Mud Field Est (Co…**
11,488	91,783
Start Depth (ftKB)	**End Depth (ftKB)**
17,705.0	19,219.0
Planned Formation	**Planned TMD (ftKB)**
WOLFCAMP B	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	Rig Number
HELMERICH & PAYNE DRILLING	394
Rig Supervisor	**Phone Mobile**
THOMAS PENDERGRASS, Toolpusher	

1, Gardner-Denver, PZ-11

Pump Number	Pwr (hp)	Rod Diameter…
1	1,300.0	
Liner Size (in)	**Stroke (in)**	**Vol/Stk OR (b…**
5	11.00	
P (psi)	**Slow Spd**	**Strokes (s…**	**Eff (%)**
2,958.0	No	90	95

2, Gardner-Denver, PZ-11

Pump Number	Pwr (hp)	Rod Diameter…
2	1,300.0	
Liner Size (in)	**Stroke (in)**	**Vol/Stk OR (b…**
5	11.00	
P (psi)	**Slow Spd**	**Strokes (s…**	**Eff (%)**
2,958.0	No	89	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
DIESEL FOR OBM	Gal

Total Received	Total Consumed	On Loc
49,969.0	42,374.0	7,595.0

Report Printed: 8/4/2017

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

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) (in²)
1	8 1/2in, MMD55DM, 1287411	-------	1.86

Nozzles (1/32")	BHA Length (ft)	String Wt (1000lbf)	Bit ROP (ft/hr)
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 (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)	HP/Area (hp/in²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
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

Error

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 (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)	HP/Area (hp/in²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
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

Error

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 (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)	HP/Area (hp/in²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
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

Error

Job Supplies

Supply Item Description	Unit Label	Total Received	Total Consumed	On Loc
DRILLING CUTTINGS	Cu. Yds	465.0	465.0	0.0
DRILLING WATER	Bbl	5,994.6	5,994.6	0.0
FUEL	Gal	52,682.0	29,602.0	11,282.0
LIQUID DRILLING WASTE	Bbl	460.0	460.0	0.0
POTABLE WATER	Gal	31,800.0	31,800.0	0.0
SEWAGE	Gal	23,400.0	23,400.0	0.0
THREAD PROTECTORS	Box	1.0	1.0	0.0
TRASH/GENERAL WASTE	Box	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)

Report Printed: 8/4/2017

Well Name: UNIVERSITY 3-35 #104HB

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	18,065.0	18,083.0	9,738.00	1.27	107.41	14.2	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
16	0	3,632.0	220	254	225	0.0	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)	HP/Area (hp/in²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
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

Error

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	18,083.0	18,350.0	10,005.00	4.07	111.48	65.6	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
32	70	3,916.0	186	221	190		18.0

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)	HP/Area (hp/in²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
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

Error

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	18,350.0	18,368.0	10,023.00	1.17	112.65	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
23	0	3,814.0	186	221	190		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)	HP/Area (hp/in²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
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

Error

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	18,368.0	18,728.0	10,383.00	3.15	115.80	114.3	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
36	70	4,056.0	186	221	190		20.0

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)	HP/Area (hp/in²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
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	9.49

Error

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	18,728.0	18,743.0	10,398.00	0.80	116.60	18.8	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
18	0	3,715.0	161	242	207		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)	HP/Area (hp/in²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
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	9.49

Error

Well Name: UNIVERSITY 3-35 #104HB

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	18,743.0	19,219.0	10,874.00	3.88	120.48	122.7	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
32	70	4,150.0	185	171	162		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)	HP/Area (hp/in²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
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	9.50

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	Problem Subtype	Start Date	Start Depth (ftKB)	End Depth (ftKB)	Est Cost (Cost)	Est Lost Time (hr)
Other	C/O SWAB ON MP #2 POD #1	8/2/2017	17,203.0	17,203.0		

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	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)
17,717.00	88.99	0.10	8,471.43	9,423.07	9,356.18	1,131.27	0.78
17,811.00	89.50	359.36	8,472.66	9,516.51	9,450.17	1,130.82	0.96
17,906.00	91.07	359.19	8,472.19	9,610.86	9,545.16	1,129.62	1.66
18,000.00	90.87	0.61	8,470.60	9,704.32	9,639.14	1,129.46	1.53
18,095.00	88.99	1.68	8,470.72	9,798.98	9,734.12	1,131.36	2.28
18,189.00	89.19	1.76	8,472.21	9,892.71	9,828.06	1,134.18	0.23
18,284.00	89.87	1.08	8,472.99	9,987.40	9,923.03	1,136.53	1.01
18,378.00	88.19	1.33	8,474.58	10,081.06	10,016.99	1,138.51	1.81
18,473.00	88.62	0.10	8,477.22	10,175.63	10,111.95	1,139.69	1.37
18,567.00	88.56	359.05	8,479.54	10,269.01	10,205.91	1,139.00	1.12
18,662.00	88.25	358.20	8,482.18	10,363.20	10,300.85	1,136.72	0.95

Well Name: UNIVERSITY 3-35 #104HB

Survey Data

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

Partner Drilling Report

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

Well Name: UNIVERSITY 3-35 #104HB

API/UWI No.	Surface Legal Location	Well License/Permit No.	State/Province
42461405810000	A-U47; SEC. 11; BLK 4; UL SURVEY	824982	TEXAS

Original Spud/Spud Rig Date	Rig Release Date	KB to GL (ft)	KB-Casing Flange Distance (ft)
7/19/2017 23:00		25.00	

Original Spud/Spud Rig Date	Weather	Temperature (°F)	Road Condition	Hole Condition
7/19/2017	CLEAR	75.0	GOOD	GOOD

Current Status/OART	24 Hour Forecast
POOH LAYING DOWN DRILL PIPE @ REPORT TIME	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

Start Time	End Time	Dur (hr)	Phase	Ops Code	Sub Code	Time Code	Operation Summary
06:00	06:30	0.50	24PHC, Prod Hole Csg	CI	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/g…	Funnel Viscosity (s/qt)	PV Calc (cP)	YP Calc (lbf/100ft²)
10:00	INVERMUL	19,219.0	9.20	58	13.0	12.005
Gel 10 sec (kPa) (lb…	Gel 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/g…	Funnel Viscosity (s/qt)	PV Calc (cP)	YP Calc (lbf/100ft²)
01:00	INVERMUL	19,219.0	9.20	58	13.0	12.005
Gel 10 sec (kPa) (lb…	Gel 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	AFE+Supp Amt (Cost)
DD.17.30781.CAP.DRL	2,331,000.00
Day Total (Cost)	**Cum To Date (Cost)**
56,075	1,675,691
Mud Field Est (Cost)	**Cum Mud Field Est (Co…**
2,965	94,747
Start Depth (ftKB)	**End Depth (ftKB)**
19,219.0	19,219.0
Planned Formation	**Planned TMD (ftKB)**
WOLFCAMP B	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	Rig Number
HELMERICH & PAYNE DRILLING	394
Rig Supervisor	**Phone Mobile**
THOMAS PENDERGRASS, Toolpusher	

1, Gardner-Denver, PZ-11

Pump Number	Pwr (hp)	Rod Diameter…
1	1,300.0	
Liner 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	
Liner 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	Total Received	Total Consumed	On Loc
DIESEL FOR OBM	Gal	49,969.0	42,374.0	7,595.0
DRILLING CUTTINGS	Cu. Yds	465.0	465.0	0.0
DRILLING WATER	Bbl	5,994.6	5,994.6	0.0
FUEL	Gal	52,682.0	29,602.0	11,282.0

Report Printed: 8/4/2017

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) (in²)

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 (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)	HP/Area (hp/in²)	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

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	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	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	Total Received	Total Consumed	On Loc
LIQUID DRILLING WASTE	Bbl	460.0	460.0	0.0
POTABLE WATER	Gal	31,800.0	31,800.0	0.0
SEWAGE	Gal	23,400.0	23,400.0	0.0
THREAD PROTECTORS	Box	1.0	1.0	0.0
TRASH/GENERAL WASTE	Box	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)

Report Printed: 8/4/2017