



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/24/2017
Report #: 22.0, DFS: 20.48
Time Log DFS: 20.48
Depth Progress: 1,685.00

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 FAIR	Temperature (°F) 70.0	Road Condition GOOD
Current Status/OART ROTATE / SLIDE DRLG IN LATERAL SECTION AT REPORT TIME		24 Hour Forecast DRILL, SLIDE AND SURVEY 8 1/2" PRODUCTION LATERAL TO TD, CIRC HOLE CLEAN,	

Short Report
ROTATE / SLIDE DRLG IN LATERAL SECTION, RIG SERVICE - LUBE RIG / SLIDE DRLG IN LATERAL SECTION,

NOTE: PUMPING 20 BBL WEIGHTED SWEEPS EVERY 300'

Mud Volumes

Active Volume (bbl) 4,227.1	Var Active Vol (bbl) 303.4	Balance (bbl) 404.3	Tank Volume (bbl) 3,134.4	Additions (bbl) 66.2	Losses (bbl) 167.1	Hole Volume (bbl) 1,092.7
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Time Log

Start Time	End Time	Dur (hr)	Phase	Ops Code	Sub Code	Time Code	Operation Summary
06:00	16:30	10.50	23PHLD, Prod Hole Lat Drill	DR	c	O	ROTATE / SLIDE DRLG AND SURVEY F/ 15825' TO 16678' 853' @ 81 FPH AVG ROP NOTE: PUMPING 20 BBL WEIGHTED SWEEPS EVERY 300'
16:30	17:00	0.50	23PHLD, Prod Hole Lat Drill	RM	b	O	RIG SERVICE - LUBE RIG
17:00	06:00	13.00	23PHLD, Prod Hole Lat Drill	DR	c	O	ROTATE / SLIDE DRLG AND SURVEY F/ 16678' TO 17510' 832' @ 64 FPH AVG ROP NOTE: PUMPING 20 BBL WEIGHTED SWEEPS EVERY 300'

Mud Checks

Time 15:00	Type INVERMUL	Depth (ftKB) 16,300.0	Density (kg/m³) (lb/g...) 9.30	Funnel Viscosity (s/qt) 56	PV Calc (cP) 14.0	YP Calc (lb/100ft²) 13.005
Gel 10 sec (kPa) (lb...) 11.005	Gell 10 min (kPa) (l...) 18.007	Gel 30 min (kPa) (lb...) 20.008	Filtrate (mL/30min)	Filter Cake (1/32")	pH	Solids (%) 10.8
MBT (lb/bbl)	Percent Oil (%) 69.3	Percent Water (%) 20.0	Chlorides (kg/m³) (...) 38,000.000	Calcium (kg/m³) (m...) 19,800.000	Potassium (mg/L)	Electric Stab (V) 821.0
Time 05:00	Type INVERMUL	Depth (ftKB) 17,109.0	Density (kg/m³) (lb/g...) 9.40	Funnel Viscosity (s/qt) 58	PV Calc (cP) 14.0	YP Calc (lb/100ft²) 15.006
Gel 10 sec (kPa) (lb...) 12.005	Gell 10 min (kPa) (l...) 17.007	Gel 30 min (kPa) (lb...) 19.008	Filtrate (mL/30min)	Filter Cake (1/32")	pH	Solids (%) 11.0
MBT (lb/bbl)	Percent Oil (%) 70.0	Percent Water (%) 19.0	Chlorides (kg/m³) (...) 38,000.000	Calcium (kg/m³) (m...) 19,200.000	Potassium (mg/L)	Electric Stab (V) 796.0

Mud Volumes

Tank/Addition/Loss	Type	Volume (bbl)	Subtype
Addition	Water	48.0	
Hole	Hole	1,092.7	
Tank	Reserve	526.0	
Loss	SURFACE EQUIPMENT	140.1	
Tank	TOTAL CIRC	1,515.7	
Tank	INVERMUL	1,092.7	
Addition	CHEMICALS	18.2	
Loss	DOWNHOLE	0.0	
Loss	EVAPORATION	9.0	
Loss	FILTRATION	18.0	

Drill Strings

BHA #8, Curve

Bit Run	Drill Bit 8 1/2in, MMD55DM, 12871270	IADC Bit Dull -----	TFA (incl Noz) (in²) 1.86
Nozzles (1/32") 22/22/22/22/22	BHA Length (ft) 12,130.33	String Wt (1000lb) 79.6	Bit ROP (ft/hr)

Mud Motors

Motor Bend 2.12 FIXED	Bit to Bend 4.04	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	664.93	IF

AFE Number DD.17.30779.CAP.DRL	AFE+Supp Amt (Cost) 2,177,000.00
Day Total (Cost) 103,709	Cum To Date (Cost) 1,833,168
Mud Field Est (Cost) 12,682	Cum Mud Field Est (Co... 108,616
Start Depth (ftKB) 15,825.0	End Depth (ftKB) 17,510.0
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
MARTY ARREZOLA, Consultant	281-220-5828
DEAN DUFFY, Rig Clerk/Logistics	281-220-5829

Personnel Log

Head Count	23.0
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Rigs

HELMERICH & PAYNE DRILLING, 3

Contractor HELMERICH & PAYNE DRILLING	Rig Number 394
Rig Supervisor THOMAS PENDERGRASS, Toolpusher	Phone Mobile 918-936-7394

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... 0.067
P (psi) 740.0	Slow Spd Yes	Strokes (s... 20
P (psi) 4,221.0	Slow Spd No	Strokes (s... 107
		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... 0.067
P (psi) 630.0	Slow Spd Yes	Strokes (s... 20
P (psi) 4,221.0	Slow Spd No	Strokes (s... 107
		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	20.0
BAROID (BULK)	205.00	22.0
BARO-TROL PLUS	77.97	20.0
CALCIUM CHL 95 -98%	17.10	54.0
CON DET	59.00	4.0
DRILTREAT	97.02	5.0
GELTONE V	65.00	8.0
LIME	6.00	34.0
SCALE CHARGE	10.00	1.0
SUSPENTONE	134.10	8.0
TRANSPORTATI ON	1.00	760.9



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Depth Progress: 1,685.00

Drill String Components

Item Des	Manual/Tally Jts	OD (in)	ID (in)	Len (ft)	Top Thread
Drill Pipe	306	5	4.28	9,638.80	IF
Agitator		6 7/8	2.44	24.22	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	33.74	IF

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 15,825.0	End Depth (ftKB) 15,991.0	Cum Depth (ft) 7,693.00	Drilling Time (hr) 0.77	Cum Drill Time (hr) 87.87	Interval ROP (ft/hr) 215.6	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 4,059.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 16.0	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) 27.2	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 82.6	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.97
Error				

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 15,991.0	End Depth (ftKB) 15,993.0	Cum Depth (ft) 7,695.00	Drilling Time (hr) 0.08	Cum Drill Time (hr) 87.95	Interval ROP (ft/hr) 25.0	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 0	SPP (psi) 3,814.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 27.2	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 82.6	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.97
Error				

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 15,993.0	End Depth (ftKB) 15,997.0	Cum Depth (ft) 7,699.00	Drilling Time (hr) 0.14	Cum Drill Time (hr) 88.09	Interval ROP (ft/hr) 28.6	Flow Rate (gpm) 565
WOB (1000lbf) 32	Rotary RPM (rpm) 26	SPP (psi) 3,799.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 3.0	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) 27.2	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 82.6	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.97
Error				

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 15,997.0	End Depth (ftKB) 16,000.0	Cum Depth (ft) 7,702.00	Drilling Time (hr) 0.14	Cum Drill Time (hr) 88.23	Interval ROP (ft/hr) 21.4	Flow Rate (gpm) 565
WOB (1000lbf) 34	Rotary RPM (rpm) 0	SPP (psi) 3,788.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 27.2	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 82.6	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.97
Error				

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 16,000.0	End Depth (ftKB) 16,082.0	Cum Depth (ft) 7,784.00	Drilling Time (hr) 0.90	Cum Drill Time (hr) 89.13	Interval ROP (ft/hr) 91.1	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 4,044.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 17.0	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...

Job Supplies

Supply Item Description DIESEL FOR OBM	Unit Label Gal
Total Received 40,295.4	Total Consumed 33,361.4
On Loc 6,934.0	
Supply Item Description DRILLING CUTTINGS	Unit Label Cu. Yds
Total Received 400.0	Total Consumed 400.0
On Loc 0.0	
Supply Item Description DRILLING WATER	Unit Label Bbl
Total Received 6,436.7	Total Consumed 6,436.7
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 FUEL	Unit Label Gal
Total Received 48,192.4	Total Consumed 38,363.4
On Loc 9,829.0	
Supply Item Description LIQUID DRILLING WASTE	Unit Label Bbl
Total Received 590.0	Total Consumed 590.0
On Loc 0.0	
Supply Item Description POTABLE WATER	Unit Label Gal
Total Received 21,300.0	Total Consumed 21,300.0
On Loc 0.0	
Supply Item Description SEWAGE	Unit Label Gal
Total Received 33,400.0	Total Consumed 33,400.0
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 Ea
Total Received 2.0	Total Consumed 2.0
On Loc 0.0	

Safety Checks

Time	Type	Safety Topic
17:30	Pre-Tour	WORKING IN BAD WEATHER
05:30	Pre-Tour	MAKING CONNECTIO NS

Wellbores

Wellbore Name
UNIVERSITY 3-35 #102HB

Kick Offs & Key Depths

Type	Top Depth (ftKB)



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Time Log DFS: 20.48
Depth Progress: 1,685.00

Hydraulic Calculations

Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
27.2	0.5	97.7	82.6	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)
261.4	554.3	101.3	110.7	9.98

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 16,082.0	End Depth (ftKB) 16,093.0	Cum Depth (ft) 7,795.00	Drilling Time (hr) 0.57	Cum Drill Time (hr) 89.70	Interval ROP (ft/hr) 19.3	Flow Rate (gpm) 565
WOB (1000lbf) 32	Rotary RPM (rpm) 0	SPP (psi) 3,805.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
27.2	0.5	97.7	82.6	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)
261.4	554.3	101.3	110.7	9.98

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 16,093.0	End Depth (ftKB) 16,173.0	Cum Depth (ft) 7,875.00	Drilling Time (hr) 0.88	Cum Drill Time (hr) 90.58	Interval ROP (ft/hr) 90.9	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 71	SPP (psi) 4,042.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 17.0	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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
27.2	0.5	97.7	82.6	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)
261.4	554.3	101.3	110.7	9.98

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 16,173.0	End Depth (ftKB) 16,187.0	Cum Depth (ft) 7,889.00	Drilling Time (hr) 0.67	Cum Drill Time (hr) 91.25	Interval ROP (ft/hr) 20.9	Flow Rate (gpm) 565
WOB (1000lbf) 35	Rotary RPM (rpm) 0	SPP (psi) 3,790.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
27.2	0.5	97.7	82.6	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)
261.4	554.3	101.3	110.7	9.98

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 16,187.0	End Depth (ftKB) 16,461.0	Cum Depth (ft) 8,163.00	Drilling Time (hr) 2.79	Cum Drill Time (hr) 94.04	Interval ROP (ft/hr) 98.2	Flow Rate (gpm) 565
WOB (1000lbf) 31	Rotary RPM (rpm) 70	SPP (psi) 4,007.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 220	SO Str Wt (1000lbf) 220	Drilling Torque 18.0	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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
27.2	0.5	97.7	82.6	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)
261.4	554.3	101.3	110.7	9.99

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 16,461.0	End Depth (ftKB) 16,475.0	Cum Depth (ft) 8,177.00	Drilling Time (hr) 0.72	Cum Drill Time (hr) 94.76	Interval ROP (ft/hr) 19.4	Flow Rate (gpm) 565
WOB (1000lbf) 35	Rotary RPM (rpm) 0	SPP (psi) 3,737.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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...



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Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
27.2	0.5	97.7	82.6	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)
261.4	554.3	101.3	110.7	9.99

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 16,475.0	End Depth (ftKB) 16,554.0	Cum Depth (ft) 8,256.00	Drilling Time (hr) 0.72	Cum Drill Time (hr) 95.48	Interval ROP (ft/hr) 109.7	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,705.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 6.0	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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
26.5	0.5	97.7	80.4	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)
261.4	554.3	101.3	110.7	9.73

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 16,554.0	End Depth (ftKB) 15,568.0	Cum Depth (ft) 7,270.00	Drilling Time (hr) 0.67	Cum Drill Time (hr) 96.15	Interval ROP (ft/hr) -1,471.6	Flow Rate (gpm) 565
WOB (1000lbf) 26	Rotary RPM (rpm) 70	SPP (psi) 3,727.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
26.5	0.5	97.7	80.4	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)
261.4	554.3	101.3	110.7	9.70

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 15,568.0	End Depth (ftKB) 16,678.0	Cum Depth (ft) 8,380.00	Drilling Time (hr) 0.94	Cum Drill Time (hr) 97.09	Interval ROP (ft/hr) 1,180.9	Flow Rate (gpm) 565
WOB (1000lbf) 31	Rotary RPM (rpm) 70	SPP (psi) 4,114.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 19.0	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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
26.5	0.5	97.7	80.4	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)
261.4	554.3	101.3	110.7	9.73

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 16,678.0	End Depth (ftKB) 16,688.0	Cum Depth (ft) 8,390.00	Drilling Time (hr) 0.50	Cum Drill Time (hr) 97.59	Interval ROP (ft/hr) 20.0	Flow Rate (gpm) 565
WOB (1000lbf) 34	Rotary RPM (rpm) 0	SPP (psi) 3,768.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
26.5	0.5	97.7	80.4	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)
261.4	554.3	101.3	110.7	9.73

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 16,688.0	End Depth (ftKB) 16,838.0	Cum Depth (ft) 8,540.00	Drilling Time (hr) 1.42	Cum Drill Time (hr) 99.01	Interval ROP (ft/hr) 105.6	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 4,093.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 19.0	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...



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/24/2017
Report #: 22.0, DFS: 20.48
Time Log DFS: 20.48
Depth Progress: 1,685.00

Hydraulic Calculations

Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
26.5	0.5	97.7	80.4	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)
261.4	554.3	101.3	110.7	9.74

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 #102HB	16,838.0	16,852.0	8,554.00	0.88	99.89	15.9	565
WOB (1000lbf)	Rotary RPM (rpm)	SPP (psi)	Drill Str Wt (1000...)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque	Off Btm Tq
12	0	3,714.0	185	250	220	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 (%)
26.5	0.5	97.7	80.4	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)
261.4	554.3	101.3	110.7	9.74

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 #102HB	16,852.0	17,119.0	8,821.00	3.02	102.91	88.4	565
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	4,142.0	185	250	220	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 (%)
26.5	0.5	97.7	80.4	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)
261.4	554.3	101.3	110.7	9.75

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 #102HB	17,119.0	17,133.0	8,835.00	0.98	103.89	14.3	565
WOB (1000lbf)	Rotary RPM (rpm)	SPP (psi)	Drill Str Wt (1000...)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque	Off Btm Tq
1	0	3,871.0	185	250	220	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 (%)
26.5	0.5	97.7	80.4	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)
261.4	554.3	101.3	110.7	9.75

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 #102HB	17,133.0	17,252.0	8,954.00	1.67	105.56	71.3	565
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	4,186.0	185	250	220	19.0	
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 (%)
26.5	0.5	97.7	80.4	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)
261.4	554.3	101.3	110.7	9.75

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 #102HB	17,252.0	17,266.0	8,968.00	0.86	106.42	16.3	565
WOB (1000lbf)	Rotary RPM (rpm)	SPP (psi)	Drill Str Wt (1000...)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque	Off Btm Tq
7	0	3,943.0	185	250	220	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...



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/24/2017
Report #: 22.0, DFS: 20.48
Time Log DFS: 20.48
Depth Progress: 1,685.00

Hydraulic Calculations

Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
26.5	0.5	97.7	80.4	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)
261.4	554.3	101.3	110.7	9.75

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB)	End Depth (ftKB)	Cum Depth (ft)	Drilling Time (hr)	Cum Drill Time (hr)	Interval ROP (ft/hr)	Flow Rate (gpm)
	17,266.0	17,402.0	9,104.00	1.78	108.20	76.4	565
WOB (1000lbf)	Rotary RPM (rpm)	SPP (psi)	Drill Str Wt (1000...)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque	Off Btm Tq
29	70	4,184.0	185	250	220	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 (%)
26.5	0.5	97.7	80.4	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)
261.4	554.3	101.3	110.7	9.76

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB)	End Depth (ftKB)	Cum Depth (ft)	Drilling Time (hr)	Cum Drill Time (hr)	Interval ROP (ft/hr)	Flow Rate (gpm)
	17,402.0	17,420.0	9,122.00	1.01	109.21	17.8	565
WOB (1000lbf)	Rotary RPM (rpm)	SPP (psi)	Drill Str Wt (1000...)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque	Off Btm Tq
10	0	3,989.0	185	250	220	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 (%)
26.8	0.5	97.7	81.3	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)
261.4	554.3	101.3	110.7	9.85

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB)	End Depth (ftKB)	Cum Depth (ft)	Drilling Time (hr)	Cum Drill Time (hr)	Interval ROP (ft/hr)	Flow Rate (gpm)
	17,420.0	17,510.0	9,212.00	0.55	109.76	163.6	565
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	4,159.0	185	250	220	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 (%)
26.8	0.5	97.7	81.3	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)
261.4	554.3	101.3	110.7	9.85

Error

Kicks

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

Lost Circulation

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

Interval Problems

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

Interval Lessons

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

Safety Incidents

Time	Category	Type	Subtype	Cause	Lost time?	Severity
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Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/24/2017
Report #: 22.0, DFS: 20.48
Time Log DFS: 20.48
Depth Progress: 1,685.00

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
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)
15,828.00	88.05	359.00	8,426.90	7,572.89	7,573.08	-9.22	3.44
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
15,923.00	88.15	358.12	8,430.05	7,667.79	7,667.99	-11.61	0.93
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,017.00	90.64	1.28	8,431.05	7,761.76	7,761.97	-12.10	4.28
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,112.00	87.45	0.45	8,432.63	7,856.73	7,856.93	-10.66	3.47
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,206.00	89.36	4.06	8,435.25	7,950.62	7,950.80	-6.97	4.34
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,300.00	87.68	1.76	8,437.67	8,044.48	8,044.64	-2.19	3.03
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,394.00	87.61	0.87	8,441.54	8,138.39	8,138.53	-0.04	0.95
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,489.00	89.43	1.15	8,443.99	8,233.35	8,233.48	1.63	1.94
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,583.00	90.07	2.41	8,444.40	8,327.32	8,327.43	4.55	1.50
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,678.00	90.57	2.28	8,443.87	8,422.26	8,422.35	8.44	0.54
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,772.00	89.26	1.28	8,444.01	8,516.22	8,516.30	11.36	1.75
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,866.00	91.48	1.67	8,443.40	8,610.20	8,610.27	13.78	2.40
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,961.00	91.78	0.79	8,440.70	8,705.14	8,705.20	15.82	0.98
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
17,056.00	92.59	0.70	8,437.08	8,800.07	8,800.13	17.05	0.86
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
17,150.00	90.97	0.49	8,434.16	8,894.02	8,894.07	18.03	1.74
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
17,245.00	91.04	0.13	8,432.49	8,989.01	8,989.06	18.54	0.39
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
17,340.00	90.94	1.07	8,430.85	9,083.99	9,084.04	19.54	0.99
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
17,434.00	88.42	1.38	8,431.38	9,177.97	9,178.01	21.55	2.70



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/25/2017
Report #: 23.0, DFS: 21.48
Time Log DFS: 21.48
Depth Progress: 1,445.00

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 CLOUDY	Temperature (°F) 69.0	Road Condition GOOD
Current Status/OART ROTATE / SLIDE DRLG IN LATERAL SECTION AT REPORT TIME	24 Hour Forecast DRILL, SLIDE AND SURVEY 8 1/2" PRODUCTION LATERAL TO TD, CIRC HOLE CLEAN, POOH, RACK BACK DP IN DERRICK, LD DIRECTIONAL TOOLS, PREP TO RUN CSG, RUN CSG.		

Short Report
ROTATE / SLIDE DRLG IN LATERAL SECTION, RIG SERVICE - LUBE RIG / SLIDE DRLG IN LATERAL SECTION,
NOTE: PUMPING 20 BBL WEIGHTED SWEEPS EVERY 300'

Mud Volumes						
Active Volume (bbl) 4,490.8	Var Active Vol (bbl) 263.7	Balance (bbl) 325.6	Tank Volume (bbl) 3,307.2	Additions (bbl) 66.9	Losses (bbl) 128.8	Hole Volume (bbl) 1,183.6

Time Log						
Start Time	End Time	Dur (hr)	Phase	Ops Code	Sub Code	Time Code
06:00	16:30	10.50	23PHLD, Prod Hole Lat Drill	DR	c	O
ROTATE / SLIDE DRLG AND SURVEY F/ 17510' TO 18349' 839' @ 80 FPH AVG ROP NOTE: PUMPING 20 BBL WEIGHTED SWEEPS EVERY 300'						
16:30	17:00	0.50	23PHLD, Prod Hole Lat Drill	RM	b	O
RIG SERVICE - LUBE RIG						
17:00	06:00	13.00	23PHLD, Prod Hole Lat Drill	DR	c	O
ROTATE / SLIDE DRLG AND SURVEY F/ 18349' TO 18955' 606' @ 47 FPH AVG ROP NOTE: PUMPING 20 BBL WEIGHTED SWEEPS EVERY 300'						

Mud Checks						
Time 15:00	Type INVERMUL	Depth (ftKB) 18,001.0	Density (kg/m³) (lb/g... 9.35	Funnel Viscosity (s/qt) 59	PV Calc (cP) 12.0	YP Calc (lb/100ft²) 14.006
Gel 10 sec (kPa) (lb... 10.004	Gell 10 min (kPa) (l... 15.006	Gel 30 min (kPa) (lb... 17.007	Filtrate (mL/30min) 35,000.000	Filter Cake (1/32") 19,600.000	pH Potassium (mg/L) 751.0	Solids (%) Electric Stab (V) 751.0
MBT (lb/bbl) 69.0	Percent Oil (%) 69.0	Percent Water (%) 20.0	Chlorides (kg/m³) (... 35,000.000	Calcium (kg/m³) (m... 19,600.000	Potassium (mg/L) 751.0	Electric Stab (V) 751.0
Time 05:00	Type INVERMUL	Depth (ftKB) 18,587.0	Density (kg/m³) (lb/g... 9.40	Funnel Viscosity (s/qt) 56	PV Calc (cP) 13.0	YP Calc (lb/100ft²) 12.005
Gel 10 sec (kPa) (lb... 10.004	Gell 10 min (kPa) (l... 15.006	Gel 30 min (kPa) (lb... 17.007	Filtrate (mL/30min) 38,000.000	Filter Cake (1/32") 20,000.000	pH Potassium (mg/L) 831.0	Solids (%) Electric Stab (V) 831.0
MBT (lb/bbl) 69.0	Percent Oil (%) 69.0	Percent Water (%) 20.0	Chlorides (kg/m³) (... 38,000.000	Calcium (kg/m³) (m... 20,000.000	Potassium (mg/L) 831.0	Electric Stab (V) 831.0

Mud Volumes			
Tank/Addition/Loss	Type	Volume (bbl)	Subtype
Addition	Water	48.0	
Hole	Hole	1,183.6	
Tank	Reserve	485.0	
Loss	SURFACE EQUIPMENT	105.8	
Tank	TOTAL CIRC	1,638.6	
Tank	INVERMUL	1,183.6	
Addition	CHEMICALS	18.9	
Loss	DOWNHOLE	0.0	
Loss	EVAPORATION	8.0	
Loss	FILTRATION	15.0	

Drill Strings			
BHA #8, Curve			
Bit Run	Drill Bit 8 1/2in, MMD55DM, 12871270	IADC Bit Dull -----	TFA (incl Noz) (in²) 1.86
Nozzles (1/32") 22/22/22/22/22	BHA Length (ft) 12,130.33	String Wt (1000lb) 79.6	Bit ROP (ft/hr) 79.6

Mud Motors		
Motor Bend 2.12 FIXED	Bit to Bend 4.04	Rotor Nozzle Diameter (in)

AFE Number DD.17.30779.CAP.DRL	AFE+Supp Amt (Cost) 2,177,000.00
Day Total (Cost) 52,723	Cum To Date (Cost) 1,885,891
Mud Field Est (Cost) 7,212	Cum Mud Field Est (Co... 115,828
Start Depth (ftKB) 17,510.0	End Depth (ftKB) 18,955.0
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
MARTY ARREZOLA, 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 918-936-7394

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... 0.067	
P (psi) 750.0	Slow Spd Yes	Strokes (s... 40	Eff (%) 95
P (psi) 4,320.0	Slow Spd No	Strokes (s... 107	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... 0.067	
P (psi) 650.0	Slow Spd Yes	Strokes (s... 20	Eff (%) 95
P (psi) 4,320.0	Slow Spd No	Strokes (s... 107	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	11.0
BAROID (BULK)	205.00	5.0
BARO-TROL PLUS	77.97	12.0
CALCIUM CHL 95 -98%	17.10	66.0
DRILTREAT	97.02	7.0
GELTONE V	65.00	6.0
LIME	6.00	50.0
SCALE CHARGE	10.00	1.0
SUSPENTONE	134.10	3.0
TRANSPORTATI ON	1.00	705.95



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/25/2017
Report #: 23.0, DFS: 21.48
Time Log DFS: 21.48
Depth Progress: 1,445.00

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	24.22	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	33.74	IF

Drilling Parameters							
Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 17,510.0	End Depth (ftKB) 17,594.0	Cum Depth (ft) 9,296.00	Drilling Time (hr) 1.44	Cum Drill Time (hr) 111.20	Interval ROP (ft/hr) 58.3	Flow Rate (gpm) 565
WOB (1000lbf) 32	Rotary RPM (rpm) 70	SPP (psi) 4,080.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 16.0	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) 26.8	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 81.3	% P @ bit (%) 2	
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.86	
Error					

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 17,594.0	End Depth (ftKB) 17,607.0	Cum Depth (ft) 9,309.00	Drilling Time (hr) 0.80	Cum Drill Time (hr) 112.00	Interval ROP (ft/hr) 16.2	Flow Rate (gpm) 565
WOB (1000lbf) 43	Rotary RPM (rpm) 0	SPP (psi) 3,891.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 26.8	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 81.3	% P @ bit (%) 2	
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.86	
Error					

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 17,607.0	End Depth (ftKB) 17,609.0	Cum Depth (ft) 9,311.00	Drilling Time (hr) 0.07	Cum Drill Time (hr) 112.07	Interval ROP (ft/hr) 28.6	Flow Rate (gpm) 565
WOB (1000lbf) 27	Rotary RPM (rpm) 40	SPP (psi) 4,101.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 17.0	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) 26.8	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 81.3	% P @ bit (%) 2	
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.86	
Error					

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 17,609.0	End Depth (ftKB) 17,610.0	Cum Depth (ft) 9,312.00	Drilling Time (hr) 0.01	Cum Drill Time (hr) 112.08	Interval ROP (ft/hr) 100.0	Flow Rate (gpm) 565
WOB (1000lbf) 28	Rotary RPM (rpm) 0	SPP (psi) 4,141.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 26.8	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 81.3	% P @ bit (%) 2	
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.86	
Error					

Job Supplies		
Supply Item Description DIESEL FOR OBM	Unit Label Gal	
Total Received 40,295.4	Total Consumed 33,361.4	On Loc 6,934.0

Supply Item Description DRILLING CUTTINGS	Unit Label Cu. Yds	
Total Received 400.0	Total Consumed 400.0	On Loc 0.0

Supply Item Description DRILLING WATER	Unit Label Bbl	
Total Received 6,436.7	Total Consumed 6,436.7	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 FUEL	Unit Label Gal	
Total Received 48,192.4	Total Consumed 38,363.4	On Loc 9,829.0

Supply Item Description LIQUID DRILLING WASTE	Unit Label Bbl	
Total Received 590.0	Total Consumed 590.0	On Loc 0.0

Supply Item Description POTABLE WATER	Unit Label Gal	
Total Received 21,300.0	Total Consumed 21,300.0	On Loc 0.0

Supply Item Description SEWAGE	Unit Label Gal	
Total Received 33,400.0	Total Consumed 33,400.0	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 Ea	
Total Received 2.0	Total Consumed 2.0	On Loc 0.0

Safety Checks		
Time	Type	Safety Topic
17:30	Pre-Tour	HOUSEKEEPING
05:30	Pre-Tour	WORKING WITH RIG TONGS

Wellbores	
Wellbore Name UNIVERSITY 3-35 #102HB	

Kick Offs & Key Depths	
Type	Top Depth (ftKB)



Partner Drilling Report

Report Date: 6/25/2017
Report #: 23.0, DFS: 21.48
Time Log DFS: 21.48
Depth Progress: 1,445.00

Well Name: UNIVERSITY 3-35 #102HB

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 17,610.0	End Depth (ftKB) 18,150.0	Cum Depth (ft) 9,852.00	Drilling Time (hr) 6.02	Cum Drill Time (hr) 118.10	Interval ROP (ft/hr) 89.7	Flow Rate (gpm) 565
WOB (1000lbf) 31	Rotary RPM (rpm) 70	SPP (psi) 4,060.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 20.0	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) 26.8	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 81.3	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.87

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,150.0	End Depth (ftKB) 18,176.0	Cum Depth (ft) 9,878.00	Drilling Time (hr) 0.66	Cum Drill Time (hr) 118.76	Interval ROP (ft/hr) 39.4	Flow Rate (gpm) 565
WOB (1000lbf) 33	Rotary RPM (rpm) 0	SPP (psi) 3,929.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 13.0	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) 26.8	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 81.3	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.87

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,176.0	End Depth (ftKB) 18,255.0	Cum Depth (ft) 9,957.00	Drilling Time (hr) 0.74	Cum Drill Time (hr) 119.50	Interval ROP (ft/hr) 106.8	Flow Rate (gpm) 565
WOB (1000lbf) 28	Rotary RPM (rpm) 70	SPP (psi) 4,175.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 20.0	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,255.0	End Depth (ftKB) 18,271.0	Cum Depth (ft) 9,973.00	Drilling Time (hr) 0.67	Cum Drill Time (hr) 120.17	Interval ROP (ft/hr) 23.9	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 0	SPP (psi) 3,918.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,271.0	End Depth (ftKB) 18,348.0	Cum Depth (ft) 10,050.00	Drilling Time (hr) 1.09	Cum Drill Time (hr) 121.26	Interval ROP (ft/hr) 70.6	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 4,246.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 20.0	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error



Partner Drilling Report

Report Date: 6/25/2017
Report #: 23.0, DFS: 21.48
Time Log DFS: 21.48
Depth Progress: 1,445.00

Well Name: UNIVERSITY 3-35 #102HB

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,348.0	End Depth (ftKB) 18,366.0	Cum Depth (ft) 10,068.00	Drilling Time (hr) 0.82	Cum Drill Time (hr) 122.08	Interval ROP (ft/hr) 22.0	Flow Rate (gpm) 565
WOB (1000lbf) 37	Rotary RPM (rpm) 0	SPP (psi) 3,952.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,366.0	End Depth (ftKB) 18,444.0	Cum Depth (ft) 10,146.00	Drilling Time (hr) 1.29	Cum Drill Time (hr) 123.37	Interval ROP (ft/hr) 60.5	Flow Rate (gpm) 565
WOB (1000lbf) 27	Rotary RPM (rpm) 67	SPP (psi) 4,175.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 19.0	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,444.0	End Depth (ftKB) 18,456.0	Cum Depth (ft) 10,158.00	Drilling Time (hr) 0.66	Cum Drill Time (hr) 124.03	Interval ROP (ft/hr) 18.2	Flow Rate (gpm) 565
WOB (1000lbf) 16	Rotary RPM (rpm) 0	SPP (psi) 4,010.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,456.0	End Depth (ftKB) 18,459.0	Cum Depth (ft) 10,161.00	Drilling Time (hr) 0.07	Cum Drill Time (hr) 124.10	Interval ROP (ft/hr) 42.9	Flow Rate (gpm) 565
WOB (1000lbf) 28	Rotary RPM (rpm) 49	SPP (psi) 4,224.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 20.0	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,459.0	End Depth (ftKB) 18,462.0	Cum Depth (ft) 10,164.00	Drilling Time (hr) 0.02	Cum Drill Time (hr) 124.12	Interval ROP (ft/hr) 150.0	Flow Rate (gpm) 565
WOB (1000lbf) 31	Rotary RPM (rpm) 0	SPP (psi) 4,291.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error



Partner Drilling Report

Report Date: 6/25/2017
Report #: 23.0, DFS: 21.48
Time Log DFS: 21.48
Depth Progress: 1,445.00

Well Name: UNIVERSITY 3-35 #102HB

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,462.0	End Depth (ftKB) 18,537.0	Cum Depth (ft) 10,239.00	Drilling Time (hr) 1.02	Cum Drill Time (hr) 125.14	Interval ROP (ft/hr) 73.5	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 68	SPP (psi) 4,227.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 20.0	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,537.0	End Depth (ftKB) 18,560.0	Cum Depth (ft) 10,262.00	Drilling Time (hr) 1.17	Cum Drill Time (hr) 126.31	Interval ROP (ft/hr) 19.7	Flow Rate (gpm) 565
WOB (1000lbf) 14	Rotary RPM (rpm) 0	SPP (psi) 3,932.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,560.0	End Depth (ftKB) 18,587.0	Cum Depth (ft) 10,289.00	Drilling Time (hr) 0.64	Cum Drill Time (hr) 126.95	Interval ROP (ft/hr) 42.2	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 4,214.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 20.0	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,587.0	End Depth (ftKB) 18,596.0	Cum Depth (ft) 10,298.00	Drilling Time (hr) 0.62	Cum Drill Time (hr) 127.57	Interval ROP (ft/hr) 14.5	Flow Rate (gpm) 565
WOB (1000lbf) 35	Rotary RPM (rpm) 0	SPP (psi) 3,990.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,596.0	End Depth (ftKB) 18,631.0	Cum Depth (ft) 10,333.00	Drilling Time (hr) 0.67	Cum Drill Time (hr) 128.24	Interval ROP (ft/hr) 52.2	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 69	SPP (psi) 4,219.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 20.0	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error



Partner Drilling Report

Report Date: 6/25/2017
Report #: 23.0, DFS: 21.48
Time Log DFS: 21.48
Depth Progress: 1,445.00

Well Name: UNIVERSITY 3-35 #102HB

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,631.0	End Depth (ftKB) 18,640.0	Cum Depth (ft) 10,342.00	Drilling Time (hr) 0.50	Cum Drill Time (hr) 128.74	Interval ROP (ft/hr) 18.0	Flow Rate (gpm) 565
WOB (1000lbf) 19	Rotary RPM (rpm) 0	SPP (psi) 3,988.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.74

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,640.0	End Depth (ftKB) 18,749.0	Cum Depth (ft) 10,451.00	Drilling Time (hr) 1.65	Cum Drill Time (hr) 130.39	Interval ROP (ft/hr) 66.1	Flow Rate (gpm) 565
WOB (1000lbf) 31	Rotary RPM (rpm) 70	SPP (psi) 4,262.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 20.0	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.75

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,749.0	End Depth (ftKB) 18,755.0	Cum Depth (ft) 10,457.00	Drilling Time (hr) 0.45	Cum Drill Time (hr) 130.84	Interval ROP (ft/hr) 13.3	Flow Rate (gpm) 565
WOB (1000lbf) 33	Rotary RPM (rpm) 0	SPP (psi) 4,025.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.75

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,755.0	End Depth (ftKB) 18,914.0	Cum Depth (ft) 10,616.00	Drilling Time (hr) 2.15	Cum Drill Time (hr) 132.99	Interval ROP (ft/hr) 74.0	Flow Rate (gpm) 565
WOB (1000lbf) 31	Rotary RPM (rpm) 70	SPP (psi) 4,225.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 20.0	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) 26.7	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 80.9	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.75

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,914.0	End Depth (ftKB) 18,936.0	Cum Depth (ft) 10,638.00	Drilling Time (hr) 0.93	Cum Drill Time (hr) 133.92	Interval ROP (ft/hr) 23.7	Flow Rate (gpm) 565
WOB (1000lbf) 16	Rotary RPM (rpm) 0	SPP (psi) 4,023.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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) 26.8	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 81.3	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.88

Error



Partner Drilling Report

Report Date: 6/25/2017
Report #: 23.0, DFS: 21.48
Time Log DFS: 21.48
Depth Progress: 1,445.00

Well Name: UNIVERSITY 3-35 #102HB

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,936.0	End Depth (ftKB) 18,955.0	Cum Depth (ft) 10,657.00	Drilling Time (hr) 0.19	Cum Drill Time (hr) 134.11	Interval ROP (ft/hr) 100.0	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 4,237.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 20.0	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) 26.8	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 81.3	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.89
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
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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)
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	
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) 17,529.00	Inclination (°) 90.67	Azimuth (°) 2.18	TVD (ftKB) 8,432.13	VS (ft) 9,272.93	NS (ft) 9,272.95	EW (ft) 24.50	DLS (°/100ft) 2.51
MD (ftKB) 17,623.00	Inclination (°) 88.59	Azimuth (°) 1.14	TVD (ftKB) 8,432.74	VS (ft) 9,366.90	NS (ft) 9,366.90	EW (ft) 27.22	DLS (°/100ft) 2.47
MD (ftKB) 17,717.00	Inclination (°) 89.06	Azimuth (°) 0.77	TVD (ftKB) 8,434.66	VS (ft) 9,460.87	NS (ft) 9,460.87	EW (ft) 28.79	DLS (°/100ft) 0.64
MD (ftKB) 17,812.00	Inclination (°) 89.46	Azimuth (°) 1.10	TVD (ftKB) 8,435.89	VS (ft) 9,555.86	NS (ft) 9,555.85	EW (ft) 30.34	DLS (°/100ft) 0.55
MD (ftKB) 17,906.00	Inclination (°) 89.33	Azimuth (°) 0.26	TVD (ftKB) 8,436.88	VS (ft) 9,649.85	NS (ft) 9,649.83	EW (ft) 31.45	DLS (°/100ft) 0.90
MD (ftKB) 18,001.00	Inclination (°) 89.76	Azimuth (°) 359.28	TVD (ftKB) 8,437.64	VS (ft) 9,744.84	NS (ft) 9,744.83	EW (ft) 31.07	DLS (°/100ft) 1.13



Partner Drilling Report

Report Date: 6/25/2017
Report #: 23.0, DFS: 21.48
Time Log DFS: 21.48
Depth Progress: 1,445.00

Well Name: UNIVERSITY 3-35 #102HB

Survey Data

MD (ftKB) 18,095.00	Inclination (°) 90.64	Azimuth (°) 359.26	TVD (ftKB) 8,437.31	VS (ft) 9,838.82	NS (ft) 9,838.82	EW (ft) 29.87	DLS (°/100ft) 0.94
MD (ftKB) 18,190.00	Inclination (°) 91.08	Azimuth (°) 1.21	TVD (ftKB) 8,435.88	VS (ft) 9,933.81	NS (ft) 9,933.80	EW (ft) 30.26	DLS (°/100ft) 2.10
MD (ftKB) 18,284.00	Inclination (°) 89.87	Azimuth (°) 2.32	TVD (ftKB) 8,435.11	VS (ft) 10,027.77	NS (ft) 10,027.75	EW (ft) 33.16	DLS (°/100ft) 1.75
MD (ftKB) 18,379.00	Inclination (°) 88.49	Azimuth (°) 4.56	TVD (ftKB) 8,436.46	VS (ft) 10,122.62	NS (ft) 10,122.56	EW (ft) 38.86	DLS (°/100ft) 2.77
MD (ftKB) 18,473.00	Inclination (°) 90.44	Azimuth (°) 6.94	TVD (ftKB) 8,437.34	VS (ft) 10,216.18	NS (ft) 10,216.08	EW (ft) 48.27	DLS (°/100ft) 3.27
MD (ftKB) 18,568.00	Inclination (°) 88.55	Azimuth (°) 6.05	TVD (ftKB) 8,438.18	VS (ft) 10,310.63	NS (ft) 10,310.46	EW (ft) 59.02	DLS (°/100ft) 2.20
MD (ftKB) 18,662.00	Inclination (°) 86.17	Azimuth (°) 3.69	TVD (ftKB) 8,442.51	VS (ft) 10,404.22	NS (ft) 10,404.00	EW (ft) 66.99	DLS (°/100ft) 3.56
MD (ftKB) 18,757.00	Inclination (°) 87.38	Azimuth (°) 3.25	TVD (ftKB) 8,447.85	VS (ft) 10,498.93	NS (ft) 10,498.68	EW (ft) 72.73	DLS (°/100ft) 1.36
MD (ftKB) 18,851.00	Inclination (°) 90.13	Azimuth (°) 3.04	TVD (ftKB) 8,449.90	VS (ft) 10,592.78	NS (ft) 10,592.51	EW (ft) 77.89	DLS (°/100ft) 2.93



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/26/2017
Report #: 24.0, DFS: 22.48
Time Log DFS: 22.48
Depth Progress: 260.00

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 CLOUDY	Temperature (°F) 68.0	Road Condition GOOD
Current Status/OART POOH TO RUN CASING AT REPORT TIME		24 Hour Forecast FINISH POOH, RACK BACK DP IN DERRICK, LD DIRECTIONAL TOOLS, PREP TO RUN CSG, PJSM, RUN CSG. R/D CSG TOOLS, PJSM, R/U CMT HEAD AND CEMENTS, RUN CMT JOB.	

Short Report
 ROTATE / SLIDE DRLG IN LATERAL SECTION, TD LATERAL SECTION @ 0900 HRS TD DEPTH: 19215' ON 6-25-17, CIRCULATE CLEAN UP CYCLE, FLOW CHECK: WELL STATIC, PUMP SLUG POOH TO RUN PRODUCTION CASING. LD AGITATOR, CONTINUE TO POOH.

NOTE: TIGHT CONNECTIONS CREW USED TONGS TO BREAK CONNECTIONS ON DP.

Mud Volumes						
Active Volume (bbl) 4,598.6	Var Active Vol (bbl) 107.8	Balance (bbl) 89.7	Tank Volume (bbl) 3,376.4	Additions (bbl) 44.2	Losses (bbl) 26.1	Hole Volume (bbl) 1,222.2

Time Log						
Start Time	End Time	Dur (hr)	Phase	Ops Code	Sub Code	Time Code
06:00	09:00	3.00	23PHLD, Prod Hole Lat Drill	DR	c	O
ROTATE / SLIDE DRLG AND SURVEY F/ 18955' TO 19215' TD LATERAL SECTION @ 0900 HRS.						
09:00	14:00	5.00	24PHC, Prod Hole Csg	CI	d	O
CONDUCTED CLEAN UP CYCLE - PUMPING 3 WEIGHTED SWEEPS AND CONTINUOUSLY ROTATING & RECIPROCATING PIPE THROUGH OUT CLEAN UP CYCLE.						
14:00	14:30	0.50	24PHC, Prod Hole Csg	CI	d	O
- PUMP SLUG TO POOH. - CONDUCT FLOW CHECK: WELL STATIC.						
14:30	18:00	3.50	24PHC, Prod Hole Csg	TP	c	O
POOH TO RUN 5 1/2" 20# P110 GEO CONN PRODUCTION CASING. F/ 19215' TO 14473' NOTE: PULLED FIRST 10 STANDS SLOWLY AT 45 FT/MIN.						
18:00	00:00	6.00	24PHC, Prod Hole Csg	TP	c	O
POOH TO RUN 5 1/2" 20# P110 GEO CONN PRODUCTION CASING. F/ 14473' TO 7787' NOTE: CREW USED TONGS TO BREAK TIGHT CONNECTIONS.						
00:00	01:30	1.50	24PHC, Prod Hole Csg	TP	c	O
POOH TO RUN 5 1/2" 20# P110 GEO CONN PRODUCTION CASING. F/ 7787' TO 6100' NOTE: CREW USED TONGS TO BREAK TIGHT CONNECTIONS.						
01:30	02:00	0.50	24PHC, Prod Hole Csg	OT	e	O
PULL ROTATING HEAD BEARING ASSEMBLY. INSTALL TRIP NIPPLE.						
02:00	05:00	3.00	24PHC, Prod Hole Csg	TP	c	O
POOH TO RUN 5 1/2" 20# P110 GEO CONN PRODUCTION CASING. F/ 6100' TO 1826' LD AGITATOR NOTE: CREW USED TONGS TO BREAK TIGHT CONNECTIONS.						
05:00	06:00	1.00	24PHC, Prod Hole Csg	TP	c	O
CONTINUE TO POOH F/ 1826' TO 854' NOTE: CREW USED TONGS TO BREAK TIGHT CONNECTIONS. NOTE: NOTIFIED TRRC FOR PRODUCTION CASING JOB AND CEMENTING OPERATIONS @ 1224 HRS ON 06-25-17, SPOKE WITH KARA OPERATOR # 94 OF THE TRRC NOTE: NO DRAG OBSERVED WHILE POOH.						

AFE Number DD.17.30779.CAP.DRL	AFE+Supp Amt (Cost) 2,177,000.00
Day Total (Cost) 73,305	Cum To Date (Cost) 1,959,196
Mud Field Est (Cost) 4,588	Cum Mud Field Est (Co... 120,416
Start Depth (ftKB) 18,955.0	End Depth (ftKB) 19,215.0
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
MARTY ARREZOLA, Consultant	281-220-5828
DEAN DUFFY, Rig Clerk/Logistics	281-220-5829

Personnel Log	
Head Count	29.0

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

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... 0.067	
P (psi) 4,320.0	Slow Spd No	Strokes (s... 107	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... 0.067	
P (psi) 4,320.0	Slow Spd No	Strokes (s... 107	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	6.0
BAROID (BULK)	205.00	8.0
CALCIUM CHL 95 -98%	17.10	60.0
DRILTREAT	97.02	4.0
LIME	6.00	40.0
OIL ABSORB-CLAY	14.00	6.0

Job Supplies		
Supply Item Description DIESEL FOR OBM	Unit Label Gal	
Total Received 40,295.4	Total Consumed 33,361.4	On Loc 6,934.0
Supply Item Description DRILLING CUTTINGS	Unit Label Cu. Yds	
Total Received 400.0	Total Consumed 400.0	On Loc 0.0



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/26/2017
Report #: 24.0, DFS: 22.48
Time Log DFS: 22.48
Depth Progress: 260.00

Mud Checks

Time 15:00	Type INVERMUL	Depth (ftKB) 19,215.0	Density (kg/m³) (lb/g... 9.65	Funnel Viscosity (s/qt) 58	PV Calc (cP) 14.0	YP Calc (lb/100ft²) 13.005
Gel 10 sec (kPa) (lb... 11.005	Gell 10 min (kPa) (l... 15.006	Gel 30 min (kPa) (lb... 17.007	Filtrate (mL/30min) 40,000.000	Filter Cake (1/32") 20,000.000	pH	Solids (%) 13.0
MBT (lb/bbl)	Percent Oil (%) 67.5	Percent Water (%) 19.5	Chlorides (kg/m³) (... 40,000.000	Calcium (kg/m³) (m... 20,000.000	Potassium (mg/L)	Electric Stab (V) 812.0
Time 05:00	Type INVERMUL	Depth (ftKB) 19,215.0	Density (kg/m³) (lb/g... 9.60	Funnel Viscosity (s/qt) 61	PV Calc (cP) 14.0	YP Calc (lb/100ft²) 14.006
Gel 10 sec (kPa) (lb... 11.005	Gell 10 min (kPa) (l... 17.007	Gel 30 min (kPa) (lb... 19.008	Filtrate (mL/30min)	Filter Cake (1/32")	pH	Solids (%) 12.0
MBT (lb/bbl)	Percent Oil (%) 69.0	Percent Water (%) 19.0	Chlorides (kg/m³) (... 41,000.000	Calcium (kg/m³) (m... 20,000.000	Potassium (mg/L)	Electric Stab (V) 805.0

Mud Volumes

Tank/Addition/Loss	Type	Volume (bbl)	Subtype
Addition	Water	30.0	
Hole	Hole	1,222.2	
Tank	Reserve	379.0	
Loss	SURFACE EQUIPMENT	21.1	
Tank	TOTAL CIRC	1,775.2	
Tank	INVERMUL	1,222.2	
Addition	CHEMICALS	14.2	
Loss	DOWNHOLE	0.0	
Loss	EVAPORATION	0.0	
Loss	FILTRATION	5.0	

Drill Strings

BHA #8, Curve

Bit Run	Drill Bit 8 1/2in, MMD55DM, 12871270	IADC Bit Dull -----	TFA (incl Noz) (in²) 1.86
Nozzles (1/32") 22/22/22/22/22	BHA Length (ft) 12,130.33	String Wt (1000lb) 79.6	Bit ROP (ft/hr)

Mud Motors

Motor Bend 2.12 FIXED	Bit to Bend 4.04	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	664.93	IF
Drill Pipe	306	5	4.28	9,638.80	IF
Agitator		6 7/8	2.44	24.22	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	33.74	IF

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 18,955.0	End Depth (ftKB) 19,013.0	Cum Depth (ft) 10,715.00	Drilling Time (hr) 0.62	Cum Drill Time (hr) 134.73	Interval ROP (ft/hr) 93.5	Flow Rate (gpm) 565
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 4,237.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 20.0	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) 26.8	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.7	Bit Pressure Drop (psi) 81.3	% P @ bit (%) 2
Max Casing AV (ft/min) 261.4	Max Open Hole AV (ft/min) 554.3	Min Casing AV (ft/min) 101.3	Min Open Hole AV (ft/min) 110.7	ECD End (lb/gal) 9.89
Error				

Error							
Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 19,013.0	End Depth (ftKB) 19,022.0	Cum Depth (ft) 10,724.00	Drilling Time (hr) 0.70	Cum Drill Time (hr) 135.43	Interval ROP (ft/hr) 12.9	Flow Rate (gpm) 565
WOB (1000lbf) 34	Rotary RPM (rpm) 0	SPP (psi) 4,020.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	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.

Job Supplies

Supply Item Description DRILLING WATER			Unit Label Bbl
Total Received 6,436.7	Total Consumed 6,436.7	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 FUEL			Unit Label Gal
Total Received 48,192.4	Total Consumed 38,363.4	On Loc	9,829.0
Supply Item Description LIQUID DRILLING WASTE			Unit Label Bbl
Total Received 590.0	Total Consumed 590.0	On Loc	0.0
Supply Item Description POTABLE WATER			Unit Label Gal
Total Received 21,300.0	Total Consumed 21,300.0	On Loc	0.0
Supply Item Description SEWAGE			Unit Label Gal
Total Received 33,400.0	Total Consumed 33,400.0	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 Ea
Total Received 2.0	Total Consumed 2.0	On Loc	0.0

Safety Checks

Time	Type	Safety Topic
17:30	Pre-Tour	WORKING W/ RIG TONGS & PULLING ROT HEAD
05:30	Pre-Tour	WORKING W/ RIG TONGS

Wellbores

Wellbore Name
UNIVERSITY 3-35 #102HB

Kick Offs & Key Depths

Type	Top Depth (ftKB)



Partner Drilling Report

Report Date: 6/26/2017
Report #: 24.0, DFS: 22.48
Time Log DFS: 22.48
Depth Progress: 260.00

Well Name: UNIVERSITY 3-35 #102HB

Hydraulic Calculations

Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
26.8	0.5	97.7	81.3	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)
261.4	554.3	101.3	110.7	9.89

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 19,022.0	End Depth (ftKB) 19,215.0	Cum Depth (ft) 10,917.00	Drilling Time (hr) 1.71	Cum Drill Time (hr) 137.14	Interval ROP (ft/hr) 112.9	Flow Rate (gpm) 565
WOB (1000lbf) 31	Rotary RPM (rpm) 70	SPP (psi) 4,357.0	Drill Str Wt (1000... 195	PU Str Wt (1000lbf) 250	SO Str Wt (1000lbf) 220	Drilling Torque 19.0	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 (%)
26.8	0.5	97.7	81.3	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)
261.4	554.3	101.3	110.7	

Error

Unable to calculate ECD because unable to interpolate TVD

Kicks

Kick Date	Kick Depth (ftKB)	Control Date	Control Depth (ftKB)	Kick Class
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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
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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)
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Action Taken

Interval Lessons

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

Safety Incidents

Time	Category	Type	Subtype	Cause	Lost time?	Severity
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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		
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) 18,945.00	Inclination (°) 88.52	Azimuth (°) 1.35	TVD (ftKB) 8,451.00	VS (ft) 10,686.72	NS (ft) 10,686.42	EW (ft) 81.49	DLS (°/100ft) 2.48
MD (ftKB) 19,040.00	Inclination (°) 87.58	Azimuth (°) 358.69	TVD (ftKB) 8,454.24	VS (ft) 10,781.65	NS (ft) 10,781.36	EW (ft) 81.52	DLS (°/100ft) 2.97
MD (ftKB) 19,134.00	Inclination (°) 87.88	Azimuth (°) 358.20	TVD (ftKB) 8,457.96	VS (ft) 10,875.53	NS (ft) 10,875.25	EW (ft) 78.97	DLS (°/100ft) 0.61



Partner Drilling Report

Report Date: 6/26/2017
Report #: 24.0, DFS: 22.48
Time Log DFS: 22.48
Depth Progress: 260.00

Well Name: UNIVERSITY 3-35 #102HB

Survey Data

MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
19,160.00	87.65	358.21	8,458.97	10,901.49	10,901.22	78.16	0.89