



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/21/2017
Report #: 19.0, DFS: 17.48
Time Log DFS: 17.48
Depth Progress: 2,200.00

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 PARTLY CLOUDY	Temperature (°F) 78.0	Road Condition GOOD
Current Status/OART DRILL 8 1/2" PRODUCTION LATERAL @ REPORT TIME.		24 Hour Forecast DRILL, SLIDE AND SURVEY 8 1/2" PRODUCTION LATERAL.	

Short Report
DRILL, SLIDE AND SURVEY 8 1/2" PRODUCTION HOLE F/ 9447' TO 10613'. CHANGE OUT 5" SWAB IN MP #2.
DRILL, SLIDE AND SURVEY 8 1/2" PRODUCTION HOLE F/ 10613' TO 11647'.

Mud Volumes

Active Volume (bbl)	Var Active Vol (bbl)	Balance (bbl)	Tank Volume (bbl)	Additions (bbl)	Losses (bbl)	Hole Volume (bbl)
781.5	-1,090.2	-1,090.2	0.0	0.0	0.0	781.5

Time Log

Start Time	End Time	Dur (hr)	Phase	Ops Code	Sub Code	Time Code	Operation Summary
06:00	17:00	11.00	23PHLD, Prod Hole Lat Drill	DR	c	O	DRILL, SLIDE AND SURVEY F/ 9447' TO 10613'. AVG ROP: 106 FT/HR
17:00	18:30	1.50	23PHLD, Prod Hole Lat Drill	TR	o	O	CHANGE OUT 5" SWAB IN #2 POD ON #2 MUD PUMP .
18:30	06:00	11.50	23PHLD, Prod Hole Lat Drill	DR	c	O	DRILL, SLIDE AND SURVEY F/ 10613' TO 11647'. AVG ROP: 89.9 FT/HR

Mud Checks

Time 15:00	Type INVERMUL	Depth (ftKB) 10,087.0	Density (kg/m³) (lb/g... 9.35	Funnel Viscosity (s/qt) 59	PV Calc (cP) 15.0	YP Calc (lb/100ft²) 13.005
Gel 10 sec (kPa) (lb... 12.005	Gell 10 min (kPa) (l... 18.007	Gel 30 min (kPa) (lb... 20.008	Filtrate (mL/30min) 42,000.000	Filter Cake (1/32") 22,000.000	pH	Solids (%) 10.8
MBT (lb/bbl)	Percent Oil (%) 67.3	Percent Water (%) 22.0	Chlorides (kg/m³) (... 42,000.000	Calcium (kg/m³) (m... 22,000.000	Potassium (mg/L) 750.0	Electric Stab (V) 750.0
Time 05:00	Type INVERMUL	Depth (ftKB) 11,323.0	Density (kg/m³) (lb/g... 9.40	Funnel Viscosity (s/qt) 59	PV Calc (cP) 16.0	YP Calc (lb/100ft²) 14.006
Gel 10 sec (kPa) (lb... 14.006	Gell 10 min (kPa) (l... 19.008	Gel 30 min (kPa) (lb... 21.009	Filtrate (mL/30min) 40,000.000	Filter Cake (1/32") 20,000.000	pH	Solids (%) 11.0
MBT (lb/bbl)	Percent Oil (%) 67.5	Percent Water (%) 21.5	Chlorides (kg/m³) (... 40,000.000	Calcium (kg/m³) (m... 20,000.000	Potassium (mg/L) 811.0	Electric Stab (V) 811.0

Mud Volumes

Tank/Addition/Loss	Type	Volume (bbl)	Subtype
Addition	Water		
Hole	Hole		
Tank	Reserve		
Loss	SURFACE EQUIPMENT		
Tank	TOTAL CIRC		
Tank	INVERMUL		
Addition	CHEMICALS		

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 (1000lbf) 87.6	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

AFE Number DD.17.30779.CAP.DRL	AFE+Supp Amt (Cost) 2,177,000.00
Day Total (Cost) 63,911	Cum To Date (Cost) 1,534,381
Mud Field Est (Cost) 5,843	Cum Mud Field Est (Co... 81,545
Start Depth (ftKB) 9,447.0	End Depth (ftKB) 11,647.0
Planned Formation WOLFCAMP B	Planned TMD (ftKB) 19,216.0
Last Casing String Intermediate Casing, 7,787.0ftKB	

Daily Contacts

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

Personnel Log

Head Count	23.0
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Rigs

HELMERICH & PAYNE DRILLING, 3

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

1, Gardner-Denver, PZ-11

Pump Number 1	Pwr (hp) 1,300.0	Rod Diameter...
Liner Size (in) 5	Stroke (in) 11.00	Vol/Stk OR (b... 0.067
P (psi) 3,423.0	Slow Spd No	Strokes (s... 107
P (psi) 620.0	Slow Spd Yes	Strokes (s... 40
		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) 3,423.0	Slow Spd No	Strokes (s... 106
P (psi) 610.0	Slow Spd No	Strokes (s... 40
		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	16.0
BARO-TROL PLUS	77.97	18.0
CALCIUM CHL 95 -98%	17.10	34.0
DRILTREAT	97.02	9.0
GELTONE V	65.00	5.0
LIME	6.00	16.0
OIL ABSORB- CLAY	14.00	11.0
TRANSPORTATI ON	1.00	350.0



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Report #: 19.0, DFS: 17.48
Time Log DFS: 17.48
Depth Progress: 2,200.00

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 9,447.0	End Depth (ftKB) 9,573.0	Cum Depth (ft) 1,275.00	Drilling Time (hr) 1.28	Cum Drill Time (hr) 17.25	Interval ROP (ft/hr) 98.4	Flow Rate (gpm) 545
WOB (1000lbf) 27	Rotary RPM (rpm) 70	SPP (psi) 3,035.0	Drill Str Wt (1000... 181	PU Str Wt (1000lbf) 218	SO Str Wt (1000lbf) 189	Drilling Torque 11.0	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) 24.2	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 76.1	% P @ bit (%) 3
Max Casing AV (ft/min) 433.8	Max Open Hole AV (ft/min) 445.3	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.67

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 9,573.0	End Depth (ftKB) 9,680.0	Cum Depth (ft) 1,382.00	Drilling Time (hr) 0.87	Cum Drill Time (hr) 18.12	Interval ROP (ft/hr) 123.0	Flow Rate (gpm) 566
WOB (1000lbf) 28	Rotary RPM (rpm) 70	SPP (psi) 3,330.0	Drill Str Wt (1000... 185	PU Str Wt (1000lbf) 212	SO Str Wt (1000lbf) 193	Drilling Torque 11.0	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) 27.1	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.9	Bit Pressure Drop (psi) 82.0	% P @ bit (%) 2
Max Casing AV (ft/min) 261.9	Max Open Hole AV (ft/min) 555.3	Min Casing AV (ft/min) 101.5	Min Open Hole AV (ft/min) 110.9	ECD End (lb/gal) 9.68

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 9,680.0	End Depth (ftKB) 9,694.0	Cum Depth (ft) 1,396.00	Drilling Time (hr) 0.44	Cum Drill Time (hr) 18.56	Interval ROP (ft/hr) 31.8	Flow Rate (gpm) 566
WOB (1000lbf) 30	Rotary RPM (rpm) 0	SPP (psi) 3,196.0	Drill Str Wt (1000... 174	PU Str Wt (1000lbf) 214	SO Str Wt (1000lbf) 204	Drilling Torque 0.0	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 27.1	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.9	Bit Pressure Drop (psi) 82.0	% P @ bit (%) 3
Max Casing AV (ft/min) 261.9	Max Open Hole AV (ft/min) 555.3	Min Casing AV (ft/min) 101.5	Min Open Hole AV (ft/min) 110.9	ECD End (lb/gal) 9.68

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 9,694.0	End Depth (ftKB) 9,772.0	Cum Depth (ft) 1,474.00	Drilling Time (hr) 0.86	Cum Drill Time (hr) 19.42	Interval ROP (ft/hr) 90.7	Flow Rate (gpm) 566
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,227.0	Drill Str Wt (1000... 180	PU Str Wt (1000lbf) 214	SO Str Wt (1000lbf) 190	Drilling Torque 11.0	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) 27.1	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.9	Bit Pressure Drop (psi) 82.0	% P @ bit (%) 3
Max Casing AV (ft/min) 261.9	Max Open Hole AV (ft/min) 555.3	Min Casing AV (ft/min) 101.5	Min Open Hole AV (ft/min) 110.9	ECD End (lb/gal) 9.69

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 9,772.0	End Depth (ftKB) 9,785.0	Cum Depth (ft) 1,487.00	Drilling Time (hr) 0.32	Cum Drill Time (hr) 19.74	Interval ROP (ft/hr) 40.6	Flow Rate (gpm) 566
WOB (1000lbf) 20	Rotary RPM (rpm) 0	SPP (psi) 3,066.0	Drill Str Wt (1000... 173	PU Str Wt (1000lbf) 209	SO Str Wt (1000lbf) 200	Drilling Torque 0.0	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 27.1	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.9	Bit Pressure Drop (psi) 82.0	% P @ bit (%) 3
Max Casing AV (ft/min) 261.9	Max Open Hole AV (ft/min) 555.3	Min Casing AV (ft/min) 101.5	Min Open Hole AV (ft/min) 110.9	ECD End (lb/gal) 9.69

Error

Job Supplies

Supply Item Description DIESEL FOR OBM	Unit Label Gal
Total Received 13,294.6	Total Consumed 12,789.0
On Loc 505.6	
Supply Item Description DRILLING CUTTINGS	Unit Label Cu. Yds
Total Received 130.0	Total Consumed 130.0
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 33,333.5	Total Consumed 26,195.5
On Loc 7,138.0	
Supply Item Description LIQUID DRILLING WASTE	Unit Label Bbl
Total Received 370.0	Total Consumed 370.0
On Loc 0.0	
Supply Item Description POTABLE WATER	Unit Label Gal
Total Received 17,300.0	Total Consumed 17,300.0
On Loc 0.0	
Supply Item Description SEWAGE	Unit Label Gal
Total Received 23,400.0	Total Consumed 23,400.0
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	MIXING CHEMICALS
05:30	Pre-Tour	PROPER PPE

Wellbores

Wellbore Name
UNIVERSITY 3-35 #102HB

Kick Offs & Key Depths

Type	Top Depth (ftKB)



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Time Log DFS: 17.48
Depth Progress: 2,200.00

Well Name: UNIVERSITY 3-35 #102HB

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 9,785.0	End Depth (ftKB) 10,055.0	Cum Depth (ft) 1,757.00	Drilling Time (hr) 2.33	Cum Drill Time (hr) 22.07	Interval ROP (ft/hr) 115.9	Flow Rate (gpm) 566
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,294.0	Drill Str Wt (1000... 180	PU Str Wt (1000lbf) 214	SO Str Wt (1000lbf) 190	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) 27.1	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.9	Bit Pressure Drop (psi) 82.0	% P @ bit (%) 2
Max Casing AV (ft/min) 261.9	Max Open Hole AV (ft/min) 555.3	Min Casing AV (ft/min) 101.5	Min Open Hole AV (ft/min) 110.9	ECD End (lb/gal) 9.70

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 10,055.0	End Depth (ftKB) 10,071.0	Cum Depth (ft) 1,773.00	Drilling Time (hr) 0.33	Cum Drill Time (hr) 22.40	Interval ROP (ft/hr) 48.5	Flow Rate (gpm) 566
WOB (1000lbf) 26	Rotary RPM (rpm) 0	SPP (psi) 3,072.0	Drill Str Wt (1000... 174	PU Str Wt (1000lbf) 215	SO Str Wt (1000lbf) 198	Drilling Torque 0.0	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 27.1	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.9	Bit Pressure Drop (psi) 82.0	% P @ bit (%) 3
Max Casing AV (ft/min) 261.9	Max Open Hole AV (ft/min) 555.3	Min Casing AV (ft/min) 101.5	Min Open Hole AV (ft/min) 110.9	ECD End (lb/gal) 9.70

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 10,071.0	End Depth (ftKB) 10,353.5	Cum Depth (ft) 2,055.50	Drilling Time (hr) 2.09	Cum Drill Time (hr) 24.49	Interval ROP (ft/hr) 135.2	Flow Rate (gpm) 566
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,276.0	Drill Str Wt (1000... 175	PU Str Wt (1000lbf) 200	SO Str Wt (1000lbf) 185	Drilling Torque 12.0	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) 27.1	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.9	Bit Pressure Drop (psi) 82.0	% P @ bit (%) 3
Max Casing AV (ft/min) 261.9	Max Open Hole AV (ft/min) 555.3	Min Casing AV (ft/min) 101.5	Min Open Hole AV (ft/min) 110.9	ECD End (lb/gal) 9.70

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 10,353.5	End Depth (ftKB) 10,353.0	Cum Depth (ft) 2,055.00	Drilling Time (hr) 0.34	Cum Drill Time (hr) 24.83	Interval ROP (ft/hr) -1.5	Flow Rate (gpm) 566
WOB (1000lbf) 29	Rotary RPM (rpm) 0	SPP (psi) 3,078.0	Drill Str Wt (1000... 170	PU Str Wt (1000lbf) 218	SO Str Wt (1000lbf) 190	Drilling Torque 0.0	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 27.1	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.9	Bit Pressure Drop (psi) 82.0	% P @ bit (%) 3
Max Casing AV (ft/min) 261.9	Max Open Hole AV (ft/min) 555.3	Min Casing AV (ft/min) 101.5	Min Open Hole AV (ft/min) 110.9	ECD End (lb/gal) 9.70

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 10,353.0	End Depth (ftKB) 10,613.0	Cum Depth (ft) 2,315.00	Drilling Time (hr) 1.88	Cum Drill Time (hr) 26.71	Interval ROP (ft/hr) 138.3	Flow Rate (gpm) 566
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,378.0	Drill Str Wt (1000... 218	PU Str Wt (1000lbf) 190	SO Str Wt (1000lbf) 190	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) 97.9	Bit Pressure Drop (psi) 81.2	% P @ bit (%) 2
Max Casing AV (ft/min) 261.9	Max Open Hole AV (ft/min) 555.3	Min Casing AV (ft/min) 101.5	Min Open Hole AV (ft/min) 110.9	ECD End (lb/gal) 9.62

Error



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Depth Progress: 2,200.00

Well Name: UNIVERSITY 3-35 #102HB

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 10,613.0	End Depth (ftKB) 10,622.0	Cum Depth (ft) 2,324.00	Drilling Time (hr) 0.40	Cum Drill Time (hr) 27.11	Interval ROP (ft/hr) 22.5	Flow Rate (gpm) 545
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,294.0	Drill Str Wt (1000... 170	PU Str Wt (1000lbf) 222	SO Str Wt (1000lbf) 185	Drilling Torque 12.0	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 2
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.60

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 10,622.0	End Depth (ftKB) 10,636.0	Cum Depth (ft) 2,338.00	Drilling Time (hr) 0.32	Cum Drill Time (hr) 27.43	Interval ROP (ft/hr) 43.8	Flow Rate (gpm) 545
WOB (1000lbf) 16	Rotary RPM (rpm) 0	SPP (psi) 2,977.0	Drill Str Wt (1000... 172	PU Str Wt (1000lbf) 214	SO Str Wt (1000lbf) 199	Drilling Torque 0.0	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 3
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.60

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 10,636.0	End Depth (ftKB) 10,817.0	Cum Depth (ft) 2,519.00	Drilling Time (hr) 1.77	Cum Drill Time (hr) 29.20	Interval ROP (ft/hr) 102.3	Flow Rate (gpm) 545
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,181.0	Drill Str Wt (1000... 172	PU Str Wt (1000lbf) 214	SO Str Wt (1000lbf) 199	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) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 2
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.61

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 10,817.0	End Depth (ftKB) 10,829.0	Cum Depth (ft) 2,531.00	Drilling Time (hr) 0.30	Cum Drill Time (hr) 29.50	Interval ROP (ft/hr) 40.0	Flow Rate (gpm) 545
WOB (1000lbf) 14	Rotary RPM (rpm) 0	SPP (psi) 3,004.0	Drill Str Wt (1000... 170	PU Str Wt (1000lbf) 214	SO Str Wt (1000lbf) 201	Drilling Torque 0.0	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 3
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.61

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 10,829.0	End Depth (ftKB) 10,908.0	Cum Depth (ft) 2,610.00	Drilling Time (hr) 0.71	Cum Drill Time (hr) 30.21	Interval ROP (ft/hr) 111.3	Flow Rate (gpm) 545
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,174.0	Drill Str Wt (1000... 179	PU Str Wt (1000lbf) 189	SO Str Wt (1000lbf) 221	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) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 2
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.61

Error



Partner Drilling Report

Report Date: 6/21/2017
Report #: 19.0, DFS: 17.48
Time Log DFS: 17.48
Depth Progress: 2,200.00

Well Name: UNIVERSITY 3-35 #102HB

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 10,908.0	End Depth (ftKB) 10,922.0	Cum Depth (ft) 2,624.00	Drilling Time (hr) 0.29	Cum Drill Time (hr) 30.50	Interval ROP (ft/hr) 48.3	Flow Rate (gpm) 545
WOB (1000lbf) 13	Rotary RPM (rpm) 0	SPP (psi) 3,017.0	Drill Str Wt (1000... 167	PU Str Wt (1000lbf) 217	SO Str Wt (1000lbf) 188	Drilling Torque 0.0	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 2
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.61

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 10,922.0	End Depth (ftKB) 11,098.0	Cum Depth (ft) 2,800.00	Drilling Time (hr) 1.63	Cum Drill Time (hr) 32.13	Interval ROP (ft/hr) 108.0	Flow Rate (gpm) 545
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,201.0	Drill Str Wt (1000... 177	PU Str Wt (1000lbf) 192	SO Str Wt (1000lbf) 220	Drilling Torque 12.5	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 2
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.61

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 11,098.0	End Depth (ftKB) 11,109.0	Cum Depth (ft) 2,811.00	Drilling Time (hr) 0.24	Cum Drill Time (hr) 32.37	Interval ROP (ft/hr) 45.8	Flow Rate (gpm) 545
WOB (1000lbf) 15	Rotary RPM (rpm) 0	SPP (psi) 3,030.0	Drill Str Wt (1000... 167	PU Str Wt (1000lbf) 222	SO Str Wt (1000lbf) 205	Drilling Torque 0.0	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 2
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.61

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 11,109.0	End Depth (ftKB) 11,381.0	Cum Depth (ft) 3,083.00	Drilling Time (hr) 2.76	Cum Drill Time (hr) 35.13	Interval ROP (ft/hr) 98.6	Flow Rate (gpm) 545
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,193.0	Drill Str Wt (1000... 176	PU Str Wt (1000lbf) 191	SO Str Wt (1000lbf) 219	Drilling Torque 12.5	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 2
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.62

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 11,381.0	End Depth (ftKB) 11,393.0	Cum Depth (ft) 3,095.00	Drilling Time (hr) 0.30	Cum Drill Time (hr) 35.43	Interval ROP (ft/hr) 40.0	Flow Rate (gpm) 545
WOB (1000lbf) 20	Rotary RPM (rpm) 0	SPP (psi) 3,039.0	Drill Str Wt (1000... 162	PU Str Wt (1000lbf) 217	SO Str Wt (1000lbf) 200	Drilling Torque 0.0	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 2
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.62

Error



Partner Drilling Report

Report Date: 6/21/2017
Report #: 19.0, DFS: 17.48
Time Log DFS: 17.48
Depth Progress: 2,200.00

Well Name: UNIVERSITY 3-35 #102HB

Drilling Parameters

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 11,393.0	End Depth (ftKB) 11,476.0	Cum Depth (ft) 3,178.00	Drilling Time (hr) 0.92	Cum Drill Time (hr) 36.35	Interval ROP (ft/hr) 90.2	Flow Rate (gpm) 545
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,221.0	Drill Str Wt (1000... 181	PU Str Wt (1000lbf) 220	SO Str Wt (1000lbf) 184	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) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 2
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.62

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 11,476.0	End Depth (ftKB) 11,489.0	Cum Depth (ft) 3,191.00	Drilling Time (hr) 0.29	Cum Drill Time (hr) 36.64	Interval ROP (ft/hr) 44.8	Flow Rate (gpm) 545
WOB (1000lbf) 16	Rotary RPM (rpm) 0	SPP (psi) 3,079.0	Drill Str Wt (1000... 168	PU Str Wt (1000lbf) 225	SO Str Wt (1000lbf) 205	Drilling Torque 0.0	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (p...	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

Hydraulic Calculations

Bit Hydraulic Power (hp) 23.9	HP/Area (hp/in²) 0.4	Bit Jet Velocity (ft/s) 94.3	Bit Pressure Drop (psi) 75.3	% P @ bit (%) 2
Max Casing AV (ft/min) 252.2	Max Open Hole AV (ft/min) 534.6	Min Casing AV (ft/min) 97.7	Min Open Hole AV (ft/min) 106.8	ECD End (lb/gal) 9.62

Error

Wellbore UNIVERSITY 3-35 #102HB	Start Depth (ftKB) 11,489.0	End Depth (ftKB) 11,647.0	Cum Depth (ft) 3,349.00	Drilling Time (hr) 1.57	Cum Drill Time (hr) 38.21	Interval ROP (ft/hr) 100.6	Flow Rate (gpm) 566
WOB (1000lbf) 30	Rotary RPM (rpm) 70	SPP (psi) 3,475.0	Drill Str Wt (1000... 168	PU Str Wt (1000lbf) 225	SO Str Wt (1000lbf) 205	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) 26.9	HP/Area (hp/in²) 0.5	Bit Jet Velocity (ft/s) 97.9	Bit Pressure Drop (psi) 81.6	% P @ bit (%) 2
Max Casing AV (ft/min) 261.9	Max Open Hole AV (ft/min) 555.3	Min Casing AV (ft/min) 101.5	Min Open Hole AV (ft/min) 110.9	ECD End (lb/gal) 9.70

Error

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	



Partner Drilling Report

Well Name: UNIVERSITY 3-35 #102HB

Report Date: 6/21/2017
Report #: 19.0, DFS: 17.48
Time Log DFS: 17.48
Depth Progress: 2,200.00

Leak Off and Formation Integrity Tests

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

Survey Data

MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
8,670.00	88.12	359.16	8,385.11	417.73	418.59	-142.95	8.74
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
9,425.00	90.03	1.39	8,378.71	1,172.53	1,173.34	-132.04	1.40
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
9,520.00	90.84	1.08	8,377.99	1,267.52	1,268.31	-129.99	0.91
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
9,614.00	92.39	1.10	8,375.34	1,361.47	1,362.25	-128.21	1.65
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
9,709.00	91.14	1.27	8,372.41	1,456.41	1,457.19	-126.24	1.33
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
9,804.00	89.80	0.50	8,371.63	1,551.40	1,552.17	-124.78	1.63
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
9,898.00	90.20	0.21	8,371.63	1,645.40	1,646.17	-124.19	0.53
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
9,993.00	90.94	0.08	8,370.69	1,740.39	1,741.16	-123.95	0.79
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
10,087.00	89.16	0.89	8,370.61	1,834.39	1,835.15	-123.16	2.08
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
10,182.00	90.03	0.88	8,371.28	1,929.38	1,930.14	-121.69	0.92
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
10,276.00	90.94	1.08	8,370.48	2,023.37	2,024.12	-120.08	0.99
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
10,371.00	88.59	0.78	8,370.87	2,118.36	2,119.10	-118.54	2.49
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
10,465.00	89.23	0.26	8,372.66	2,212.34	2,213.08	-117.69	0.88
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
10,560.00	90.50	0.15	8,372.88	2,307.34	2,308.08	-117.35	1.34
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
10,654.00	88.62	0.81	8,373.61	2,401.33	2,402.06	-116.56	2.12
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
10,749.00	89.87	0.45	8,374.86	2,496.32	2,497.05	-115.52	1.37
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
10,843.00	90.17	2.79	8,374.82	2,590.29	2,591.00	-112.86	2.51
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
10,938.00	87.95	2.99	8,376.38	2,685.18	2,685.86	-108.07	2.35
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
11,033.00	88.48	3.21	8,379.34	2,780.02	2,780.68	-102.93	0.60
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
11,127.00	88.15	1.33	8,382.11	2,873.92	2,874.56	-99.21	2.03
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
11,221.00	88.45	0.59	8,384.90	2,967.87	2,968.51	-97.64	0.85
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
11,315.00	89.63	0.04	8,386.47	3,061.86	3,062.49	-97.12	1.38
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
11,410.00	87.88	0.46	8,388.53	3,156.83	3,157.46	-96.71	1.89
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
11,502.00	88.69	2.64	8,391.29	3,248.76	3,249.38	-94.22	2.53
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
11,647.00	88.69	2.64	8,394.60	3,393.61	3,394.19	-87.54	0.00