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| Andrews University 28-33 # 1H | | | | | | | | | | DRILLING REPORT | | | | Date 1/21/2020 Spud | |
| : 00004 API # 4200348217 | | | | | | | | | | Throne - Andrews | | | | Printed 1/23/2020 TD'd | |
| Report # | 1 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | AFE # | 2019D01 | | |
| Depth | 60 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | AFE-DH | \$2,633,990 | | |
| TVD | 60 | 'KB' corr | | Phone | 346-444-8591 | | | Rig Supv | IRVING GARCIA | | | AFE-Test | | | |
| Footage | 60 | Ft/Hr | | Lithology | | | | Phone | 325-450-1134 | | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | Rig Supt | J. WEST | | | AFE-Total | | | |
| LAST 24 HRS: WAIT ON DAYLIGHT CONTINUE TO RIG UP, RAISE DERRICK, CONTINUE PREPARING RIG FOR SPUD 00:00 - 06:00 CONTINUE RIGGING UP | | | | | | | | Phone | 325-450-4025 | | | Working Int | | | |
| | | | | | | | | | | | Net Int | | | | |
| NEXT 24 HOURS: CONTINUE TO RIG UP DERRICK AND EQUIPMENT, NOTE: CREW WORKING 12 SHIFTS. M/U 17 1/2" BHA, SPUD WELL P.M. NO ACCIDENTS OR POLLUTION REPORTED. | | | | | | | | | | | | | | | |
| Mud | | | | | | | | | | | | | | | |
| Mud Company: STELLAR | | | | | | | | | | | | | | | |
| Mud Engineer: JEFF BRANTLEY | | | | | | | | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | |
| | | | | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest |
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| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | |
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| Bit | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | |
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| | | | | | | | | | | | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | Location | Bearings/Seals | Gauge | Other Dull Characteristics | Reason Pulled | | | | | |
| | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | Surveys (Max of 7) KOP: EOC: | | | | | | | | | |
| | | | | | | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | | | |
| Pumps | | | | | | | | | | | | | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | | | | | | |
| RSF-FB 1600 | | | 12 | 6.00 | | 95% | 0.1 | | | | | | | | |
| RSF-FB 1600 | | | 12 | 6.00 | | 95% | 0.1 | | | | | | | | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | | | | | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 24.00 Total Hours Daily Operations Report Time: 12:00 am - 12:00 ar | | | | | | | | | | | | | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | |
| 6:00 am | 6.00 | 1 | 66 | WAIT ON DAYLIGHT | | | | | | | | | | | |
| 12:00 am | 18.00 | 1 | 66 | RIG UP & PREP TO SPUD, SET DERRICK ON FLOOR & RAISE @ 12 NOON. RIG UP TD TRACKS, SVC LOOP TO VFD. PICK UP TD AND RIG UP SERVICE LOOP. WORK ON ST-80 (C/O TORQUE GAUGE AND RIGHT SIDE TRANSMISSION AND ROLLERS. RIG UP PVC IN BACK YARD, C/O PUMP EXP. | | | | | | | | | | | |

| Additional Comments | Mud / Chemical Used Today | | | | | | | | | | | | |
|---|---------------------------|---------------------------|--------|---------|----------------------------|-------|-------|-------------------------|-------|--|------|-----|-----|
| RR FROM AQUATERRA 2300 HRS 1/16/20 90 MILE RIG MOVE 96 HOUR RIG MOVE SPUD AT XX:XX HRS ON XX/XX/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 | | | | | | | | | | | | | |
| <div>Crews</div> <table><tr><th>Morning</th><th>Day</th><th>Evening</th><th>Relief</th></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table> | | Morning | Day | Evening | Relief | | | | | | | | |
| Morning | Day | Evening | Relief | | | | | | | | | | |
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| | | | | | | | | | | | | | |
| <div>Diesel</div> <table><tr><th></th><th>Today</th><th>Total</th></tr><tr><td>Delivered</td><td>8,398</td><td>8,398</td></tr><tr><td>On Hand</td><td>7,909</td><td></td></tr><tr><td>Used</td><td>489</td><td>489</td></tr></table> | | | Today | Total | Delivered | 8,398 | 8,398 | On Hand | 7,909 | | Used | 489 | 489 |
| | Today | Total | | | | | | | | | | | |
| Delivered | 8,398 | 8,398 | | | | | | | | | | | |
| On Hand | 7,909 | | | | | | | | | | | | |
| Used | 489 | 489 | | | | | | | | | | | |
| <div>Ton Miles</div> <table><tr><td>Line on Spool: Ft. / Size</td><td></td><td></td></tr><tr><td>Ton Miles: Current / Total</td><td></td><td></td></tr><tr><td>Line Cut: Today / Total</td><td></td><td></td></tr></table> | | Line on Spool: Ft. / Size | | | Ton Miles: Current / Total | | | Line Cut: Today / Total | | | | | |
| Line on Spool: Ft. / Size | | | | | | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | | | | | | |

| Expenses | | | | | Expenses by Category | |
|----------------------------------|--------------------------|---|---|------------|-----------------------------------|------------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost |
| 2250.10 LOCATION & ROAD EXPENSE | UNIVERSITY LANDS | 1 | PSA APP, DAMAGES & RRC APP FEE | 22,451.00 | 2250.10 LOCATION & ROAD EXPENSE | 163,612.00 |
| 2250.10 LOCATION & ROAD EXPENSE | BUTCH'S | 1 | PIT LINING, CELLAR & CONDUCTOR | 20,800.00 | 2250.105 SURFACE RENTALS | 18,307.00 |
| 2250.10 LOCATION & ROAD EXPENSE | JMC | 1 | WATER HAULING FOR LOCATION | 3,100.00 | 2250.25 DRILLING MUD & CHEMICALS | 1,396.00 |
| 2250.10 LOCATION & ROAD EXPENSE | J. CONNOR CONSULTING | 1 | APD PERMIT PREP FEES | 795.00 | 2250.30 TRANSPORTATION | 1,945.00 |
| 2250.10 LOCATION & ROAD EXPENSE | PEREZ BACKHOE | 1 | INSTALL CELLAR AND LOCATION PREP | 1,150.00 | 2250.35 RIG MOVING COST | 178,500.00 |
| 2250.10 LOCATION & ROAD EXPENSE | SBM | 1 | ROCK | 24,476.00 | 2250.45 DIRECTIONAL | 13,400.00 |
| 2250.10 LOCATION & ROAD EXPENSE | BEDROCK SERVICES | 1 | LOCATION BUILDER | 89,640.00 | 2250.55 RIG FUEL | 15,280.00 |
| 2250.10 LOCATION & ROAD EXPENSE | R & D TRUCKING | 1 | WATER HAULING FOR LOCATION | 1,200.00 | 2250.65 SUPERVISION | 12,800.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS FOR FOUR DAYS @ \$578/ DAY PLUS | 6,712.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 2,943.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN 3 DAYS @ \$45/ DAY PLUS | 685.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER FOR RIG MOVE | 950.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS FOR FOUR | 1,830.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP FOR FOUR DAYS @ \$730/ | 7,800.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS TWO DAYS @ \$140/ DAY | 280.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK TWO DAYS @ \$25/ DAY | 50.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | DAILY MUD CHARGES | 900.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | R & D TRUCKING | 2 | TRUCKING FOR FRESH WATER TO CAMP FRAC TANK | 496.00 | | |
| 2250.30 TRANSPORTATION | BIG STATE TRUCKING | 1 | TRUCKING FOR DIRECTIONAL TOOLS | 1,095.00 | | |
| 2250.30 TRANSPORTATION | BIG STATE TRUCKING | 2 | TRUCKING FOR LIGHTTOWERS AND PUMPS | 850.00 | | |
| 2250.35 RIG MOVING COST | SENDERO | 1 | RIG MOVE DAY RATE COST FOR 4 DAYS | 56,000.00 | | |
| 2250.35 RIG MOVING COST | BISON TRUCKING | 1 | RIG MOVERS | 122,500.00 | | |
| 2250.45 DIRECTIONAL | PREMIER DIRECTIONAL | 1 | CATCH UP COST FOR STAND BY RATE, PER DIEM, AND MILAGE | 13,400.00 | | |
| 2250.55 RIG FUEL | PILOT THOMAS | 1 | 7198 GAL RIG FUEL @ \$2.0311/GAL | 15,280.00 | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION FOUR DAYS AT \$1600/ DAY | 6,400.00 | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION FOUR DAYS @ \$1600/ DAY | 6,400.00 | | |

| Andrews University 28-33 # 1H | | | | | DRILLING REPORT | | Date | 1/21/2020 | Spud |
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| : 00004 | | API # 4200348217 | | Throne - Andrews | | | Printed | 1/23/2020 | TD'd |
| 2250.95 DRILLING EQUIPMENT RENTAL | Excel Products | 1 | OFFICE AND RIG SUPPLIES | | 1,983.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL FOUR DAYS @ \$200/ DAY | | 800.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | JOHNSON SPECIALTY TOOLS | 3 | TWO 6" X 6" PUMPS 2 DAYS AT \$80/ DAY | | 160.00 | | | | |
| Last Tests: | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | Daily Cost | 408,183.00 | |
| | | | | | | | Cum. Cost | 408,183.00 | |

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| Andrews University 28-33 # 1H | | | | | | | | | | DRILLING REPORT | | | | Date | | 1/22/2020 Spud | |
| : 00004 API # 4200348217 | | | | | | | | | | Throne - Andrews | | | | Printed | | 1/23/2020 TD'd | |
| Report # | 2 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | AFE # | 2019D01 | | | | |
| Depth | 60 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | AFE-DH | \$2,633,990 | | | | |
| TVD | 60 | 'KB' corr | | Phone | 346-444-8591 | | | Rig Supv | IRVING GARCIA | | | AFE-Test | | | | | |
| Footage | 0 | Ft/Hr | | Lithology | | | | Phone | 325-450-1134 | | | AFE-Comp | | | | | |
| Present Operations / Executive Summary | | | | | | | | Rig Supt | J. WEST | | | AFE-Total | | | | | |
| LAST 24 HRS: CONTINUE TO RIG UP, PREPARING RIG FOR SPUD 00:00 - 05:00 CONTINUE RIGGING UP 05:00-06:00 MAKE UP 17.5" BHA | | | | | | | | Phone | 325-450-4025 | | | Working Int | | | | | |
| | | | | | | | | | | | Net Int | | | | | | |
| NEXT 24 HOURS: M/U 17 1/2 BHA, SPUD WELL, DRILL SURFACE, RUN CASING AND CEMENT. NO ACCIDENTS OR POLLUTION REPORTED. | | | | | | | | | | | | | | | | | |
| Mud | | | | | | | | | | | | | | | | | |
| Mud Company: STELLAR | | | | | | | | | | | | | | | | | |
| Mud Engineer: JEFF | | | | | | | | | | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | | |
| | | | | | | | | | | | | | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | | |
| | | | | | | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | | |
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| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | | |
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| Bit | | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | | |
| | | | | | | | | | | | | | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | Location | Bearings/Seals | Gauge | Other Dull Characteristics | Reason Pulled | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | Surveys (Max of 7) | | | | KOP: | | EOC: | | | | | |
| | | | | | | | | | | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | |
| Pumps | | | | | | | | | | | | | | | | | |
| Make/Model | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | | | | | | | | | |
| RSF-FB 1600 | | 12 | 6.00 | | 95% | 0.1 | | | | | | | | | | | |
| RSF-FB 1600 | | 12 | 6.00 | | 95% | 0.1 | | | | | | | | | | | |
| PZ-10 | | 10 | 6.50 | | 95% | 0.1 | | | | | | | | | | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 24.00 Total Hours | | | | | | | | | | | | | | | | | |
| Daily Operations | | | | | | | | | | | | | | | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | | |
| 6:00 am | 6.00 | 1 | 60 | CONTINUE RIGGING UP | | | | | | | | | | | | | |
| 12:00 am | 18.00 | 1 | 60 | RIG UP TOP DRIVE & BACK YARD, FUNCTION TEST MUD PUMPS, RIG UP RISER. PRESSURE TEST STAND PIPE & MUD LINES & CHECK FOR LEAKS. CHANGE OUT LEAKING IBOP. | | | | | | | | | | | | | |

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|--|--------------------------|----------|--|------------------|-----------|-----------------------------------|----------------|------------|--------|
| Andrews University 28-33 # 1H | | | | DRILLING REPORT | | Date | 1/22/2020 Spud | | |
| : 00004 API # 4200348217 | | | | Throne - Andrews | | Printed | 1/23/2020 TD'd | | |
| Additional Comments | | | | | | Mud / Chemical Used Today | | | |
| <div>RR FROM AQUATERRA 2300 HRS 1/16/20</div> <div>90 MILE RIG MOVE</div> <div>96 HOUR RIG MOVE</div> <div>SPUD AT XX:XX HRS ON XX/XX/20</div> <div>NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED</div> <div>TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260</div> | | | | | | | | | |
| | | | | | | Crews | | | |
| | | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | | |
| | | | | | | | | | |
| Diesel | | | Today | Total | | | | | |
| Delivered | | | 0 | 8,398 | | | | | |
| On Hand | | | 6,985 | | | | | | |
| Used | | | 924 | 1,413 | | | | | |
| Ton Miles | | | | | | | | | |
| Line on Spool: Ft. / Size | | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | | |
| Expenses | | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | | 2250.105 SURFACE RENTALS | 1,838.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | | 2250.25 DRILLING MUD & CHEMICALS | 900.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | | 2250.30 TRANSPORTATION | 2,412.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | | 2250.45 DIRECTIONAL | 4,000.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | | 2250.90 MISC. LABOR AND SERVICES | 2,388.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | | 2250.95 DRILLING EQUIPMENT RENTAL | 235.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 900.00 | | | | | |
| 2250.30 TRANSPORTATION | WEST TEXAS HOTSHOT | 1 | TRUCKING | 487.00 | | | | | |
| 2250.30 TRANSPORTATION | BIG STATE TRUCKING | 1 | TRUCKING TO HAUL FORKLIFT TO LOCATION | 850.00 | | | | | |
| 2250.30 TRANSPORTATION | BIG STATE TRUCKING | 2 | TRUCKING FOR FLOAT EQUIP, SPOOLS, ROT HEAD AND | 1,075.00 | | | | | |
| 2250.45 DIRECTIONAL | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 4,000.00 | | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | | |
| 2250.90 MISC. LABOR AND SERVICES | SMOB SERVICES | 1 | CLEAN AND TALLY 13 1/2" CASING | 998.00 | | | | | |
| 2250.90 MISC. LABOR AND SERVICES | LUERA'S WELDING SERVICE | 1 | CUT CONDUCTOR. WELD LANDING RING AND RISER | 1,390.00 | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 1 | MANLIFT RENTAL | 150.00 | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 85.00 | | | | | |
| Last Tests: | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | Daily Cost | 14,973.00 | |
| | | | | | | | Cum. Cost | 423,156.00 | |
| | | | | | | | | | |

| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | | | Date | | 1/23/2020 Spud | | 1/23/2020 | |
|--|----------------|------------------|--|---|----------------------|-------------|---------------|--------------------|----------------|---------------|----------------------------|---------|---------------|----------------------------------|-------------|-----------|--|
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | | | Printed | | 1/24/2020 TD'd | | | |
| Report # | 3 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | | AFE # | 2019D01 | | | |
| Depth | 655 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | Phone | | | | | AFE-DH | \$2,633,990 | | |
| TVD | 655 | 'KB' corr | | Phone | 346-444-8591 | | | | Rig Supv | TONY MITCHELL | | | | AFE-Test | | | |
| Footage | 589 | Ft/Hr | | Lithology | | | | | Phone | 325-450-1134 | | | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | | AFE-Total | | | | |
| LAST 24 HRS: CONTINUE TO RIG UP, MAKE UP 17.5" BHA & SPUD WELL @ 11:30 HRS, DRLG FROM 66' TO 655' (589' @ 56'/HR). 00:00-06:00 DRLG FROM 655' TO 1194' (539' @ 90'/HR) | | | | | | | | Rig Supt | J. WEST | | | | Working Int | | | | |
| | | | | | | | | Phone | 325-450-4025 | | | | Net Int | | | | |
| NEXT 24 HOURS: DRILL SURFACE, RUN CASING, CEMENT, NIPPLE UP & TEST. NO ACCIDENTS OR POLLUTION REPORTED. | | | | | | | | | | | | | | | | | |
| Mud | | | | Mud Company: STELLAR | | | | Mud Engineer: JEFF | | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | | |
| WBM | 8.4 | 8.38 | 28 | 1 | 3 | 1 | 1 | | | 1.84 | | | 0 | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | | |
| 8 | | | | 700 | | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | | |
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| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | | |
| 1 | 1,196.74 | | PDC BIT, 8" 7/8, 5.9, 1.5* ABH MOTOR w/11.75 NBS, 17" IBS, NMPC, UBHO, 2- NMDC'S, SHOCK SUB, 17" IBS, XO, 15-6.5" DC'S, XO, 30-5" HW | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | | |
| 1 | 66 | | 17.500 | ULTERRA | CF616 | 42947 | | 9 | | | 0 | | | | | | |
| | | | | | | | | 1.167 | | | 0 | | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | | Gauge | Other Dull Characteristics | | Reason Pulled | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | | | Surveys (Max of 7) | | KOP: | | EOC: | | | | | |
| | | | | | | | | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | | | |
| Pumps | | | | | | | | MWD | | 97 | 0.040 | 235.850 | 0.041 | | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | 230 | 0.176 | 269.158 | 0.108 | | | |
| RSF-FB 1600 | | | 12 | 6.00 | | 95% | 0.1 | | | MWD | 374 | 0.440 | 227.500 | 0.229 | | | |
| RSF-FB 1600 | | | 12 | 6.00 | | 95% | 0.1 | | | MWD | 488 | 0.220 | 222.840 | 0.194 | | | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | | | | | | | | |
| Gas | Background Gas | | Connection Gas | | Trip Gas | | Max Gas | Max At @ | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 24.00 Total Hours | | | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | | |
| 5:00 am | 5.00 | 1 | 66 | CHANGE OUT LEAKING IPOB & STAB DIVERTER, MAKE UP DRESSER SLEEVE & TURN BUCKLES | | | | | | | | | | | | | |
| 10:00 am | 5.00 | 20 | 66 | MAKE UP 17.5" DIRECTIONAL BHA. | | | | | | | | | | | | | |
| 11:30 am | 1.50 | 2 | 66 | TROUBLESHOOT PUMP #2 AIRING UP & CAP GASKET LEAKING ON #1 | | | | | | | | | | | | | |
| 12:30 pm | 1.00 | 2 | 186 | MAKE UP ONE STAND OF HWDP TO DRILL RATHOLE FOR BHA. DRLG AT REDUCED RATE F/ 66' T/ 186' (120' @ 60 FPH) | | | | | | | | | | | | | |
| 2:00 pm | 1.50 | 20 | 186 | RACK BACK ONE STAND OF HWDP IN DERRICK & INSTALL MWD TOOL, MAKE UP REST OF DIRECTIONAL TOOLS & RUN IN HOLE | | | | | | | | | | | | | |
| 5:00 pm | 3.00 | 2 | 292 | DRLG AT REDUCED RATE F/186' T/292' (106' @ 53'/HR) | | | | | | | | | | | | | |
| 5:30 pm | 0.50 | 7 | 292 | LUBRICATE RIG TIGHTEN BOLTS ON TOP DRIVE STABBING GUIDE | | | | | | | | | | | | | |
| 12:00 am | 6.50 | 2 | 655 | DRLG 17.5" SURF F/292' T/655' (363' @ 60'/HR) WOB 10-15K, RPM 60-70,TRQ 12-19K, GPM 550-720, SPP 1750-1900, DIFF 300-450. INSPECTING TOPDRIVE BOLTS AT CONNECTION DUE TO VIBRATION T/ 500'. BIT BALLED UP @ 350', PUMPED SWEEP TO CLEAN BIT AND ROP IMPROVED. | | | | | | | | | | | | | |

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|--|--|--------------------------|----------|------------------|-----------------------------------|---------------------------|-------------------------|--------|-----------------------------------|---------|------------|--------|--|-------|--|
| Andrews University 28-33 # 1H | | | | DRILLING REPORT | | Date | 1/23/2020 Spud | | 1/23/2020 | | | | | | |
| : 00004 | | API # 4200348217 | | Throne - Andrews | | Printed | 1/24/2020 TD'd | | | | | | | | |
| Additional Comments | | | | | | Mud / Chemical Used Today | | | | | | | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE 156.5 HRS (56.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 | | | | | | | | | | | | | | | |
| | | | | | | Crews | | | | | | | | | |
| | | | | | | Morning | | Day | | Evening | | Relief | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | Diesel | | | | | | Today | | Total | |
| | | | | | | Delivered | | 5,200 | | 13,598 | | | | | |
| | | | | | | On Hand | | 10,340 | | | | | | | |
| | | | | | | Used | | 1,845 | | 3,258 | | | | | |
| | | | | | | Ton Miles | | | | | | | | | |
| Line on Spool: Ft. / Size | | | | | | | | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | | | | | | | | |
| Expenses | | | | | | Expenses by Category | | | | | | | | | |
| Category | | Company / Vendor | | # | Description | | Cost | | Category | | Cost | | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | | 1 | FOUR LIVING QUARTERS | | 578.00 | | 2250.105 SURFACE RENTALS | | 2,058.00 | | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | | 2 | TRASH TRAILER/ PORTA JOHN | | 45.00 | | 2250.25 DRILLING MUD & CHEMICALS | | 5,340.00 | | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | | 3 | GENERATOR AND TRANSFORMER | | 125.00 | | 2250.45 DIRECTIONAL | | 8,000.00 | | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | | 4 | INTERNET AND COMMUNICATIONS | | 195.00 | | 2250.50 DRILLING DAYWORK | | 9,115.00 | | | | |
| 2250.105 SURFACE RENTALS | | LUCKY HEALTH & SAFETY | | 1 | H2S MONITORING EQUIPMENT | | 60.00 | | 2250.55 RIG FUEL | | 10,441.00 | | | | |
| 2250.105 SURFACE RENTALS | | WATERFLEET | | 1 | WATER TREATMENT PLANT FOR CAMP | | 730.00 | | 2250.65 SUPERVISION | | 3,200.00 | | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | | 1 | FOUR LIGHT TOWERS | | 140.00 | | 2250.90 MISC. LABOR AND SERVICES | | 8,813.00 | | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | | 2 | 300 GALLON FUEL TANK | | 25.00 | | 2250.95 DRILLING EQUIPMENT RENTAL | | 5,201.00 | | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | | 3 | TWO 6X6 PUMPS | | 160.00 | | | | | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | | STELLAR DRILLING FLUIDS | | 1 | MUD COSTS | | 5,340.00 | | | | | | | | |
| 2250.45 DIRECTIONAL SERVICES | | PREMIER DIRECTIONAL | | 1 | DIRECTIONAL SERVICES | | 8,000.00 | | | | | | | | |
| 2250.50 DRILLING DAYWORK | | SENDERO | | 1 | 12.5 HRS DAYWORK @ \$17,500/DAY | | 9,115.00 | | | | | | | | |
| 2250.55 RIG FUEL | | PILOT THOMAS | | 1 | 5200 GAL OF FUEL @ 2.0037 | | 10,441.00 | | | | | | | | |
| 2250.65 SUPERVISION | | RIG UP | | 1 | SUPERVISION | | 1,600.00 | | | | | | | | |
| 2250.65 SUPERVISION | | SIERRA HAMILTON | | 1 | SUPERVISION | | 1,600.00 | | | | | | | | |
| 2250.90 MISC. LABOR AND SERVICES | | LUERA'S WELDING SERVICE | | 1 | MATERIALS & LABOR TO BUILD TROUGH | | 7,313.00 | | | | | | | | |
| 2250.90 MISC. LABOR AND SERVICES | | LUERA'S WELDING SERVICE | | 2 | DELIVER & MODIFY TROUGH | | 1,500.00 | | | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | SENDERO | | 2 | FORKLIFT RENTAL | | 85.00 | | | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | LARIAT EQUIP & SERVICES | | 1 | MANLIFT RENTAL | | 150.00 | | | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | PASON | | 1 | EDR | | 942.00 | | | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | IRON HORSE TOOLS | | 1 | COST OF RIG UP | | 4,024.00 | | | | | | | | |
| Last Tests: | | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | | Daily Cost | | 52,168.00 | | | | |
| | | | | | | | | | Cum. Cost | | 475,324.00 | | | | |
| | | | | | | | | | | | | | | | |

| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | | | Date | 1/24/2020 Spud | | 1/23/2020 | | | |
|--|----------------|--|----------------|--|----------------------|------------------|---------------|------------------|----------|--------------------|----------------------------|----------|----------------|---------------------|-------------------------|----------------------------------|--|--|
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | | | Printed | 1/25/2020 | | TD'd | | | |
| Report # | 4 | Prop TD | 20,304 | County | Andrews | | State | TX | Rig | Sendero 15 | | | AFE # | 2019D01 | | | | |
| Depth | 1,737 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | Phone | | | | AFE-DH | \$2,633,990 | | | | |
| TVD | 1,736 | 'KB' corr | | Phone | 346-444-8591 | | | | Rig Supv | TONY MITCHELL | | | AFE-Test | | | | | |
| Footage | 1,082 | Ft/Hr | 41.6 | Lithology | | | | | Phone | 325-450-1134 | | | AFE-Comp | | | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | | AFE-Total | | | | | |
| LAST 24 HRS: DRLG FROM 655' TO 1,737' (1,082' @ 69.8'/HR). 16:00-00:00 CTCH & TOO H FOR LOW ROP, 00:00-06:00 TOO H, M/U BIT #2, WORK ON TOPDRIVE | | | | | | | | | Rig Supt | J. WEST | | | Working Int | | | | | |
| | | | | | | | | | Phone | 325-450-4025 | | | Net Int | | | | | |
| NEXT 24 HOURS: CHANGE BHA, TIH, DRILL SURFACE, RUN CASING, CEMENT, NIPPLE UP & TEST. NO ACCIDENTS OR POLLUTION REPORTED | | | | | | | | | | | | | | | | | | |
| Mud | | Mud Company: STELLAR | | | | | | | | Mud Engineer: JEFF | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | | | |
| WBM | 9.3 | 9.35 | 33 | 6 | 8 | 8 | 12 | 3/32 | 78 | 8.69 | | | | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | | | |
| | 8 | .2 | .4 | 1,200 | .4 | | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | | | |
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| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | | | |
| 1 | 1,196.74 | PDC BIT, 8" 7/8, 5.9, 1.5" ABH MOTOR (0.166 RPG) w/11.75 NBS, 17" IBS, NMPC, UBHO, 2- NMDC'S, SHOCK SUB, 17" IBS, XO, 15-6.5" DC'S, XO, 21-5" HW | | | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | | |
| 1 | 66 | 1,737 | 17.500 | ULTERRA | CF616 | 42947 | 70 | 150 | 9 | 32 | | 1,069 | 26.00 | 41.1 | | | | |
| | | | | | | | 80 | | 1.167 | | | 1,069 | 26.00 | 41.1 | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | | Gauge | Other Dull Characteristics | | Reason Pulled | | | | | |
| | 1 | 1,737 | 1 | 8 | | | S | X | | 1 | | | PR | | | | | |
| String Loads | Hook Load | | Drag Up (+) | | Drag Down (-) | | Max Allowed | | Torque | | Surveys (Max of 7) | | KOP: | | EOC: | | | |
| | 110 | | 112 | | 108 | | | | 15 | | Survey Type | | Measured Depth | | Inclination Azimuth DLS | | | |
| Pumps | | | | | | | | | MWD | | 669 | | 0.660 | | 212.560 0.246 | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | | 848 | | 1.190 181.970 0.395 | | | | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 90.0 | 95% | 0.1 | 8.5 | | MWD | | 1,028 | | 1.670 317.230 1.473 | | | | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 90.0 | 95% | 0.1 | 8.6 | | MWD | | 1,212 | | 0.923 148.484 1.403 | | | | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | MWD | | 1,396 | | 1.143 154.636 0.134 | | | | |
| Gas | Background Gas | | Connection Gas | | Trip Gas | | Max Gas | | Max At @ | | MWD | | 1,581 | | 1.187 135.213 0.214 | | | |
| | | | | | | | | | | | | | | | | | | |
| 24.00 | | | Total Hours | | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | | | |
| 1:00 am | 1.00 | 5 | 655 | ADJUST GRABBER DIES ON TOP DRIVE DUE TO VIBRATION | | | | | | | | | | | | | | |
| 11:30 am | 10.50 | 2 | 1,683 | DRLG 17.5" SURF F/655' T/1,683' (1028' @ 98'/HR) WOB 20-25K, RPM 50-80,TRQ 12-19K, GPM 550-720, SPP 1950-2100, DIFF 300-450. | | | | | | | | | | | | | | |
| 12:00 pm | 0.50 | 7 | 1,683 | LUBRICATE RIG & REPAIR MUD PUMP | | | | | | | | | | | | | | |
| 12:30 pm | 0.50 | 8 | 1,683 | TROUBLESHOOT AIRED UP MUD PUMP | | | | | | | | | | | | | | |
| 4:00 pm | 3.50 | 2 | 1,724 | DRLG 17.5" SURF F/1,683' T/1,724' (41' @ 21'/HR) WOB 20-25K, RPM 50-80,TRQ 12-19K, GPM 550-720, SPP 1950-2100, DIFF 300-450. | | | | | | | | | | | | | | |
| 4:30 pm | 0.50 | 5 | 1,724 | CIRCULATE HOLE CLEAN WITH HIGH VIS SWEEP PRIOR TO TOO H DUE TO LOW ROP | | | | | | | | | | | | | | |
| 8:00 pm | 3.50 | 6 | 1,724 | TOOH THROUGH REDBED T/ 1100' KEEPING HOLE FULL WITH NO EXCESS DRAG. TRIPPED BACK IN HOLE TO 1724' TO DRILL TO TD @ 1830'. | | | | | | | | | | | | | | |
| 9:30 pm | 1.50 | 2 | 1,737 | DRLD 17.5" SURF F/ 1,724' T/ 1,737'(13' @ 13 FPH) . WOB 15-40K, RPM 40-80,TRQ 11-19K, GPM 440-750, SPP 1750-2650, DIFF 150-300. PUMPED 40 BBL 9 PPB LCM SWEEP FOR BIT BALLING WITH NO SUCCESS. BLEW SWAB ON #1 MUDPUMP, CLEANED JUNK OUT OF VALVES ON #2 PUMP. | | | | | | | | | | | | | | |
| 12:00 am | 2.50 | 6 | 1,737 | TOOH FOR ROP KEEPING HOLE FULL WITH NO EXCESS DRAG. SECOND IB STAB, NEAR BIT STAB, AND DRILL BIT WAS BALLED UP. BIT IS DBR WITH RING OUT DAMAGE ON SHOULDER. NO VISIBLE DAMAGE TO MUD MOTOR | | | | | | | | | | | | | | |

| Additional Comments | Mud / Chemical Used Today |
|---|---------------------------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 | |
| Crews | |
| Morning | DayEveningRelief |
| | |
| | |
| Diesel | |
| Delivered | TodayTotal |
| | 013,598 |
| On Hand | 8,853 |
| Used | 1,4874,745 |
| Ton Miles | |
| Line on Spool: Ft. / Size | |
| Ton Miles: Current / Total | |
| Line Cut: Today / Total | |

| Expenses | | | | | Expenses by Category | |
|-----------------------------------|--------------------------|---|--|-----------|-----------------------------------|-------------------------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,058.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 6,338.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.30 TRANSPORTATION | 1,776.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.45 DIRECTIONAL | 8,300.00 |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.50 DRILLING DAYWORK | 17,500.00 |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.65 SUPERVISION | 3,200.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS0 | 140.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,292.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 6,338.00 | | |
| 2250.30 TRANSPORTATION | BATTLE ENERGY SERVICES | 1 | HOTSHOT SPACER SPOOLS AND EQUIP TO RIG, RING GASKETS | 1,776.00 | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,300.00 | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY | 17,500.00 | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | 942.00 | | |
| Last Tests: | | | | | Pit Drill | BOP Test |
| | | | | | BOP Drill | Tour (BOP) |
| | | | | | PVT Check | AccidentsReportedToday? |
| | | | | | | NO |
| | | | | | Daily Cost | 40,464.00 |
| | | | | | Cum. Cost | 515,903.00 |

Andrews University 28-33 # 1H

: 00004 API # 4200348217

DRILLING REPORT

Throne - Andrews

Date

1/25/2020

Spud

1/23/2020

Printed

1/26/2020

TD'd

Report #

5

Prop TD

20,304

County

Andrews

State

TX

Rig

Sendero 15

AFE #

2019D01

Depth

1,830

GL

3,017.0

Co Supv

W. TRAMMELL

Phone

AFE-DH

\$2,633,990

TVD

1,830

'KB' corr

Phone

346-444-8591

Rig Supv

TONY MITCHELL

AFE-Test

Footage

93

Ft/Hr

46.5

Lithology

Phone

325-450-1134

AFE-Comp

Present Operations / Executive Summary

AFE-Total

LAST 24 HRS: REPAIR TOP DRIVE & TIH WITH BHA #2, DRLG TO CSG POINT @ 1830' (93' @ 46.5FPH), CTCH & TOO H, 00:00-06:00 L/D BHA, RUN 13 3/8 CSG

Rig Supt

J. WEST

Working Int

Phone

325-450-4025

Net Int

NEXT 24 HOURS: RUN CASING, CEMENT, NIPPLE UP & TEST. NO ACCIDENTS OR POLLUTION REPORTED

Mud

Mud Company: STELLAR

Mud Engineer: JEFF BRANTLEY

Mud Type

M W

ECD

Vis

PV

YP

Gel-Initial

Gel-10 min

Cake

WL

Solids

% Oil

% Water

Mud Losses

WBM

9.35

9.41

34

6

7

8

12

3/32

78

8.32

pH

Pm

Pf

Mf

CL

CA

LCM

Washout(%vol)

Hole Vol

Pit Vol

Stored Vol

Min To Bit

Btms Up

Full Circ

8

.2

.2

.4

1,300

Drill Pipe & Collars (top to bottom) Kelly Down:

Casing

Jts

Length

Size

Wt

ID

Type

Grade

Ann Vel

Size/Date

Top (MD)

Btm (MD)

Btm (TVD)

Wt

Grade

TOC

ShoeTest

BHA #

Length

Weight

BHA Summary

2

1,197.00

PDC BIT, BIT SUB, 8" 7/8, 5.9, 1.5* ABH MOTOR (0.166 RPG) w/11.75 NBS, 17" IBS, NMPC, UBHO, 2- NMDC'S, SHOCK SUB, 11.75" IBS, XO, 15-6.5" DC'S, XO, 21-5" HW

Bit

#

In @

Out @

Size

Mfg.

Type

Serial #

RPMs

Jets

WOB

BHA Eff

Feet/Ttl

Hrs/Ttl

Ft/Hr

Bit HP

2

1,737

1,830

17.500

DRILFOR MANCE

DF616

64181

9

93

2.00

46.5

1.052

93

2.00

46.5

Bit Grade

#

Depth

Inner

Outer

Dull Characteristics

Location

Bearings/Seals

Gauge

Other Dull Characteristics

Reason Pulled

2

1,830

1

1

A

X

0

TD

String Loads

Hook Load

Drag Up (+)

Drag Down (-)

Max Allowed

Torque

Surveys (Max of 7)

KOP:

EOC:

Survey Type

Measured Depth

Inclination

Azimuth

DLS

Pumps

MWD

1,753

0.750

129.060

0.261

Make/Model

PSI

Stroke

Liner

SPM

Eff.

GPS

GPM

SPR

RSF-FB 1600

2,650

12

6.00

90.0

95%

0.1

8.5

RSF-FB 1600

2,650

12

6.00

90.0

95%

0.1

8.6

PZ-10

10

6.50

95%

0.1

Gas

Background Gas

Connection Gas

Trip Gas

Max Gas

Max At @

24.00

Total Hours

Daily Operations

Report Time: 12:00 am - 12:00 am

End

Hours

Code

Depth

Operations

2:30 am

2.50

20

1,737

PICK UP BHA #2 AS FOLLOWS: DRILLFORMANCE 616 PDC BIT1.05 TFA, BIT SUB, 8" 7/8, 5.9, 1.5* ABH MOTOR (0.166 RPG) w/11.75 NBS, 17" IBS, NMPC, UBHO, 2- NMDC'S, SHOCK SUB, 11.75" IBS, XO, 15-6.5" DC'S, XO, 21-5" HW

12:30 pm

10.00

8

1,737

REPAIR SOLENOID VALVE & SMASHED WIRE ON J-BOX FOR LINK TILTS ON TOP DRIVE

2:00 pm

1.50

20

1,737

LAY DOWN 17" IBS & REPLACE WITH 11.75"

4:00 pm

2.00

6

1,737

TIH WITH BHA WITH GOOD DISPLACEMENT

6:00 pm

2.00

2

1,830

DRLD 17.5" SURF F/ 1,737' T/ 1,830'(93' @ 47 FPH) . WOB 15-30K, RPM 40-80,TRQ 11-19K, GPM 440-750, SPP 1750-2650, DIFF 150-300.

7:00 pm

1.00

5

1,830

PUMP FLUID CALLIPER HIGH VIS SWEEP & CIRCULATE HOLE CLEAN, SWEEP CAME BACK ON TIME. NO WASH OUT

10:30 pm

3.50

6

1,830

TOOH TO RUN SURF CASING, NO EXCESS DRAG

12:00 am

1.50

6

1,830

LAY DOWN 11 3/4" STAB, SHOCK SUB, UBHO, PONY COLLAR AND 17" STABILIZER.

| Additional Comments | Mud / Chemical Used Today |
|--|---------------------------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 | |
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| Expenses | | | | | Expenses by Category | | | |
|-----------------------------------|--------------------------|----------|--------------------------------|------------|-----------------------------------|-------------------------|------------|------------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,058.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 1,246.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 8,300.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 17,500.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,292.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS0 | 140.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 1,246.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,300.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY | 17,500.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | 942.00 | | | | |
| Last Tests: | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | Daily Cost | 33,596.00 |
| | | | | | | | Cum. Cost | 544,159.00 |

Andrews University 28-33 # 1H

: 00004 API # 4200348217

DRILLING REPORT

Throne - Andrews

Date

1/26/2020

Spud

1/23/2020

Printed

1/27/2020

TD'd

Report #

6

Prop TD

20,304

County

Andrews

State

TX

Rig

Sendero 15

AFE #

2019D01

Depth

1,830

GL

3,017.0

Co Supv

W. TRAMMELL

Phone

AFE-DH

\$2,633,990

TVD

1,830

'KB' corr

Phone

346-444-8591

Rig Supv

TONY MITCHELL

AFE-Test

Footage

0

Ft/Hr

Lithology

Phone

325-450-1134

AFE-Comp

Present Operations / Executive Summary

Phone

325-450-4025

AFE-Total

LAST 24 HRS: RUN 13 3/8 CSG & CEMENT, NIPPLE UP BOP'S; 00:00 - 06:00

Rig Supt

J. WEST

Working Int

NIPPLE UP AND TEST BOP'S

Phone

Net Int

NEXT 24 HOURS: FINISH NIPPLE UP & TEST, REPAIR TOP DRIVE, PICK UP INTERMEDIATE BHA #3 & TIH NO ACCIDENTS OR POLLUTION REPORTED

Mud

Mud Company: STELLAR

Mud Engineer: JEFF BRANTLEY

Mud Type

M W

ECD

Vis

PV

YP

Gel-Initial

Gel-10 min

Cake

WL

Solids

% Oil

% Water

Mud Losses

WBM

9.3

33

6

6

9

7

3/32

80

pH

Pm

Pf

Mf

CL

CA

LCM

Washout(%vol)

Hole Vol

Pit Vol

Stored Vol

Min To Bit

Btms Up

Full Circ

8

.2

.2

.4

1,300

Drill Pipe & Collars (top to bottom)

Kelly Down:

Jts

Length

Size

Wt

ID

Type

Grade

Ann Vel

Size/Date

Top (MD)

Btm (MD)

Btm (TVD)

Wt

Grade

TOC

ShoeTest

13.375

01/26/20

0

1,819

1,819

54.5

J55

0

BHA #

Length

Weight

BHA Summary

2

1,197.00

PDC BIT, BIT SUB, 8" 7/8, 5.9, 1.5* ABH MOTOR (0.166 RPG) w/11.75 NBS, 17" IBS, NMPC, UBHO, 2- NMDC'S, SHOCK SUB, 11.75" IBS, XO, 15-6.5" DC'S, XO, 21-5" HW

Bit

#

In @

Out @

Size

Mfg.

Type

Serial #

RPMs

Jets

WOB

BHA Eff

Feet/Ttl

Hrs/Ttl

Ft/Hr

Bit HP

2

1,737

1,830

17.500

DRILFOR MANCE

DF616

64181

9

0

1.052

93

2.00

46.5

Bit Grade

#

Depth

Inner

Outer

Dull Characteristics

Location

Bearings/Seals

Gauge

Other Dull Characteristics

Reason Pulled

2

1,830

1

1

A

X

1

TD

String Loads

Hook Load

Drag Up (+)

Drag Down (-)

Max Allowed

Torque

Surveys (Max of 7)

KOP:

EOC:

Survey Type

Measured Depth

Inclination

Azimuth

DLS

Pumps

Make/Model

PSI

Stroke

Liner

SPM

Eff.

GPS

GPM

SPR

RSF-FB 1600

2,650

12

6.00

90.0

95%

0.1

8.5

RSF-FB 1600

2,650

12

6.00

90.0

95%

0.1

8.6

PZ-10

10

6.50

95%

0.1

Gas

Background Gas

Connection Gas

Trip Gas

Max Gas

Max At @

24.00

Total Hours

Daily Operations

Report Time: 12:00 am - 12:00 am

End

Hours

Code

Depth

Operations

1:30 am

1.50

6

1,830

LAY DOWN MWD & BREAK BIT, RACK BACK MONEL & MOTOR

3:30 am

2.00

12

1,830

HOLD PRE-JOB SM & RIG UP SOUTHERN CONNECTIONS CASING CREW

8:00 am

4.50

12

1,830

RUN 13 3/8" CSG AS FOLLOWS: OSP FLOAT SHOE @ 1819' SINGLE JT SHOE TRACK, OSP FLOAT COLLAR @ 1774', 42 JTS OF 13 3/8" 54.5# J55 CASING & ONE 39' L/J WITH MANDREL HANGER. RAN 17 B/S CENTRALIZERS. 5' ABOVE F/S, 5' ABOVE AND BELOW F/C, & EVERY 4TH JT T/ SUR

10:00 am

2.00

5

1,830

INSTALL CIRCULATING SWEDGE & CIRCULATE 1.5 TIMES CASING CAPACITY @ 7 BBLS/MIN WITH NO LOSSES

1:30 pm

3.50

12

1,830

CEMENT SURF CSG: TEST LINES TO 2,000 PSI, 40 BBL FW SPACER, LEAD 1585 SX @13.5#, 1.8 YD, 508 BBLS, TAIL : 250 SX @ 14.8#, 1.34 YD, 60 BBLS, DROP PLUG, DISP W/275 BBLS OF F/W. FINAL LIFT 500 PSI, BUMPED PLUG @ 1100 PSI. HAD FULL RETURNS, 275 BBL CMT T/ SUR

2:00 pm

0.50

12

1,830

RIG DOWN CEMENTERS & FLUSH THROUGH RISER/ FLOW LINE

5:00 pm

3.00

14

1,830

BACK OUT LANDING JOINT & NIPPLE DOWN RISER, TURN BUCKLES, FLOW LINE, LAY OUT RISER

12:00 am

7.00

14

1,830

INSTALL WELL HEAD, TESTED TO 5,000 PSI FOR 15 MINUTES. NIPPLE UP BOP'S AND 67" SPACER SPOOL ON ANNULAR, HALLIBURTON ROTATING HEAD AND ORBIT VALVE.

| | | | | | | | | |
|---|--------------------------|---|--|-----------|-----------------------------------|----------------|-----------|--------|
| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 1/26/2020 Spud | 1/23/2020 | |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 1/27/2020 TD'd | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 | | | | | | | | |
| | | | | | Crews | | | |
| | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | |
| | | | | | Diesel | | | |
| | | | | | Today | | Total | |
| | | | | | Delivered | | 13,598 | |
| | | | | | On Hand | 6,731 | | |
| | | | | | Used | | 6,867 | |
| | | | | | Ton Miles | | | |
| Line on Spool: Ft. / Size | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,058.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.20 CEMENT & CEMENT SERVICES | 51,387.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.25 DRILLING MUD & CHEMICALS | 956.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.30 TRANSPORTATION | 784.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.32 TUBULAR/WELLHEAD | 5,990.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.45 DIRECTIONAL | 4,300.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS0 | 140.00 | 2250.50 DRILLING DAYWORK | 17,500.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.60 MUD LOGGING & GEO | 1,080.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.20 CEMENT & CEMENT SERVICES | WEST TEXAS CEMENTERS | 1 | CEMENT SURFACE CASING | 51,387.00 | 2250.90 MISC. LABOR AND SERVICES | 14,500.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 956.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 3,702.00 | | |
| 2250.30 TRANSPORTATION | BIG STATE TRUCKING | 1 | DELIVER DIR TOOLS & BACK HAUL TOOLS | 784.00 | 2350.15 SURFACE CASING | 51,265.00 | | |
| 2250.32 TUBULAR/WELLHEAD | BATTLE ENERGY SERVICES | 1 | NIPPLE UP BOPS | 5,990.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 4,300.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY | 17,500.00 | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.90 MISC. LABOR AND SERVICES | SOUTHERN CONNECTIONS | 1 | CASING CREW TO RUN CASING | 8,200.00 | | | | |
| 2250.90 MISC. LABOR AND SERVICES | PERMIAN POWER TONG | 1 | LAY DOWN TRUCK | 6,300.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SWECO | 1 | LAND CASING, SET AND TEST WELLHEAD | 2,410.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | 942.00 | | | | |
| 2350.15 SURFACE CASING | SOONER PIPE | 1 | 1845' (THREADS ON) 13 3/8" 54.5# J55 BUTT CASING | 51,265.00 | | | | |

| | | | | | | | | | |
|-------------------------------|-----------|------------------|-----------|------------------|-----------|-------------------------|-----------|------------|------------|
| Andrews University 28-33 # 1H | | | | DRILLING REPORT | | Date | 1/26/2020 | Spud | 1/23/2020 |
| : 00004 | | API # 4200348217 | | Throne - Andrews | | Printed | 1/27/2020 | TD'd | |
| Last Tests: | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | | Daily Cost | 156,722.00 |
| | | | | | | | | Cum. Cost | 704,581.00 |
| | | | | | | | | | |

Andrews University 28-33 # 1H

: 00004 API # 4200348217

DRILLING REPORT

Throne - Andrews

Date

1/27/2020

Spud

1/23/2020

Printed

1/28/2020

TD'd

Report #

7

Prop TD

20,304

County

Andrews

State

TX

Rig

Sendero 15

AFE #

2019D01

Depth

1,830

GL

3,017.0

Co Supv

W. TRAMMELL

Phone

AFE-DH

\$2,633,990

TVD

1,830

'KB' corr

Phone

346-444-8591

Rig Supv

TONY MITCHELL

AFE-Test

Footage

0

Ft/Hr

Lithology

Phone

325-450-1134

AFE-Comp

Present Operations / Executive Summary

Phone

325-450-4025

AFE-Total

LAST 24 HRS: NIPPLE UP AND TEST BOP'S, REPAIR TOP DRIVE, PU BHA, REPAIR RIG 00:00 - 06:00 FINISH BHA, TIH, TEST CASING & DRLG OUT SHOE TRACK

Rig Supt

J. WEST

Working Int

Net Int

NEXT 24 HOURS: DRLG 12.25" INTERMEDIATE SECTION TO KOP, NO ACCIDENTS OR POLLUTION REPORTED

Mud

Mud Company: STELLAR

Mud Engineer: JEFF BRANTLEY

Mud Type

M W

ECD

Vis

PV

YP

Gel-Initial

Gel-10 min

Cake

WL

Solids

% Oil

% Water

Mud Losses

WBM

9.3

33

6

6

9

7

3/32

81

6.69

pH

Pm

Pf

Mf

CL

CA

LCM

Washout(%vol)

Hole Vol

Pit Vol

Stored Vol

Min To Bit

Btms Up

Full Circ

8

.2

.2

.4

1,300

400

Drill Pipe & Collars (top to bottom)

Kelly Down:

Jts

Length

Size

Wt

ID

Type

Grade

Ann Vel

BHA #

Length

Weight

BHA Summary

3

1,190.05

PDC BIT, 8" 7/8, 5.9, 1.5* ABH MOTOR (0.166 RPG) w/11.75 NBS, 11.75" IBS, NMPC, UBHO, 2- NMDC'S, 11.75" IBS, ACCELGLIDE, XO, 15-6.5" DC'S, XO, 21-5" HW

Casing

Size/Date

Top (MD)

Btm (MD)

Btm (TVD)

Wt

Grade

TOC

ShoeTest

13.375

01/26/20

0

1,819

1,819

54.5

J55

0

Bit

#

In @

Out @

Size

Mfg.

Type

Serial #

RPMs

Jets

WOB

BHA Eff

Feet/Ttl

Hrs/Ttl

Ft/Hr

Bit HP

3

1,830

12.250

ULTERRA

SPL 616

49227

9

0

.994

0

Bit Grade

#

Depth

Inner

Outer

Dull Characteristics

Location

Bearings/Seals

Gauge

Other Dull Characteristics

Reason Pulled

String Loads

Hook Load

Drag Up (+)

Drag Down (-)

Max Allowed

Torque

Surveys (Max of 7)

KOP:

EOC:

Survey Type

Measured Depth

Inclination

Azimuth

DLS

Pumps

Make/Model

PSI

Stroke

Liner

SPM

Eff.

GPS

GPM

SPR

RSF-FB 1600

2,650

12

6.00

90.0

95%

0.1

8.5

RSF-FB 1600

2,650

12

6.00

90.0

95%

0.1

8.6

PZ-10

10

6.50

95%

0.1

Gas

Background Gas

Connection Gas

Trip Gas

Max Gas

Max At @

24.00

Total Hours

Daily Operations

Report Time: 12:00 am - 12:00 am

End

Hours

Code

Depth

Operations

8:00 am

8.00

15

1,830

TEST BOP'S AS FOLLOWS: RAMS & CHOKE TO 5,000 HIGH 250 LOW, ANNULAR 2,500 HIGH 250 LOW, STANDPIPE & PUMP VALVES 4500 HIGH 250 LOW

5:00 pm

9.00

8

1,830

REPAIR ELECTRIC CABLE ON JUNCTION BOX FOR LINK TILTS & TROUBLE SHOOT IBOP NOT FUNCTIONING, REPLACE VALVE

5:30 pm

0.50

7

1,830

LUBRICATE RIG

6:30 pm

1.00

14

1,830

SET & LOCK DOWN LONG WEAR BUSHING

10:00 pm

3.50

20

1,830

PICK UP BHA #3: 12.25" ULTERRA SPL616 PDC BIT, 8" 7/8, 5.9, 1.5* ABH MOTOR (0.166 RPG) w/11.75 NBS, 11.75" IBS, NMPC, UBHO, 2- NMDC'S, 11.75" IBS, ACCELGLIDE, XO, 15-6.5" DC'S, XO, 21-5" HWDP. ATTEMPT TO TEST MWD.

11:30 pm

1.50

8

1,830

UNABLE TO TEST MWD. WHEN PUMPS ARE KICKED IN STANDPIPE IS SHOWING EXCESSIVE PRESSURE, NO RETURNS. FOUND STEM STRIPPED OUT IN 4" VALVE ON STANDPIPE. REPLACED VALVE

12:00 am

0.50

20

1,830

SURFACE TEST MWD, TEST SUCCESSFUL

| Additional Comments | Mud / Chemical Used Today |
|--|---------------------------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 RIG DOWN TIME 10.5 HRS (21 HRS TOTAL) | |
| Crews | |
| Morning | DayEveningRelief |
| | |
| | |
| Diesel | |
| Delivered | TodayTotal |
| | 13,598 |
| On Hand | 5,883 |
| Used | 7,715 |
| Ton Miles | |
| Line on Spool: Ft. / Size | |
| Ton Miles: Current / Total | |
| Line Cut: Today / Total | |

| Expenses | | | | | Expenses by Category | |
|-----------------------------------|--------------------------|---|---|-----------|-----------------------------------|-----------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 3,187.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 2,546.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.32 TUBULAR/WELLHEAD | 1,957.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.45 DIRECTIONAL | 14,200.00 |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.50 DRILLING DAYWORK | 17,500.00 |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 2 | H2S TRAINING AND FIT TEST FOR THREE PEOPLE | 1,129.00 | 2250.60 MUD LOGGING & GEO | 1,080.00 |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.65 SUPERVISION | 3,200.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS0 | 140.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,672.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2350.45 CASING ACCESSORIES | 6,904.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | CHIEF OILFIELD SERVICES | 1 | SHAKER SCREENS | 1,590.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 956.00 | | |
| 2250.32 TUBULAR/WELLHEAD | BATTLE ENERGY SERVICES | 1 | TEST BOP'S | 1,957.00 | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 14,200.00 | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY | 17,500.00 | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | 942.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | IRON HORSE TOOLS | 1 | DAILY RENTAL SINGLE CHOKE, FLARELINE AND DRIVE OVER. | 230.00 | | |
| 2350.45 CASING ACCESSORIES | OSP | 1 | FLOATS AND CENTRALIZERS | 6,904.00 | | |

| | | | | | | | | | | |
|-------------------------------|-----------|------------------|-----------|------------------|-----------------|-------------------------|-----------|------------|------------|-----------|
| Andrews University 28-33 # 1H | | | | | DRILLING REPORT | | Date | 1/27/2020 | Spud | 1/23/2020 |
| : 00004 | | API # 4200348217 | | Throne - Andrews | | Printed | 1/28/2020 | TD'd | | |
| Last Tests: | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | | Daily Cost | 52,246.00 | |
| | | 1/27/2020 | | | | | | Cum. Cost | 756,827.00 | |

| | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | |
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| Andrews University 28-33 # 1H | | | | | | | | | | DRILLING REPORT | | Date | 1/28/2020 | Spud | 1/23/2020 | |
|--|----------------|---|----------------|---|------------------------|------------------|---------------|-----------------------------|---------------|----------------------------|-------------|---------------|-------------|--------|----------------------------------|-------|
| : 00004 | | API # 4200348217 | | | | Throne - Andrews | | | | Printed | 1/29/2020 | TD'd | | | | |
| Report # | 8 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | AFE # | 2019D01 | | | |
| Depth | 3,494 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | AFE-DH | \$2,633,990 | | | |
| TVD | 3,493 | 'KB' corr | | Phone | 346-444-8591 | | | Rig Supv | TONY MITCHELL | | | AFE-Test | | | | |
| Footage | 1,664 | Ft/Hr | | Lithology | 70% RED SHALE, 30% DOL | | | Phone | 325-450-1134 | | | AFE-Comp | | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | AFE-Total | | | | |
| LAST 24 HRS: FINISH PU BHA, TIH, TEST CASING, DRLG OUT SHOE TRACK & DRLG 12.25" INT SECTION TO 3,494' 00:00 - 06:00 DRLG F/ 3,494' T/ 4,065' | | | | | | | | Rig Supt | J. WEST | | | Working Int | | | | |
| | | | | | | | | Phone | 325-450-4025 | | | Net Int | | | | |
| NEXT 24 HOURS: DRLG 12.25" INTERMEDIATE SECTION TO KOP, NO ACCIDENTS OR POLLUTION REPORTED | | | | | | | | | | | | | | | | |
| Mud | | Mud Company: STELLAR | | | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | |
| WBM | 10 | 10.06 | 31 | 4 | 5 | 8 | 12 | 1/32 | 100 | | | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | |
| 10 | .2 | .2 | .4 | 144,000 | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | |
| | | | | | | | | 13.375 01/26/20 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | |
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| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | |
| 3 | 1,190.05 | PDC BIT, 8" 7/8, 5.9, 1.5* ABH MOTOR (0.166 RPG) w/11.75 NBS, 11.75" IBS, NMPC, UBHO, 2- NMDC'S, 11.75" IBS, ACCELGLIDE, XO, 15-6.5" DC'S, XO, 21-5" HW | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | |
| 3 | 1,830 | | 12.250 | ULTERRA | SPL 616 | 49227 | | 9 | | | 1,664 | | | | | |
| | | | | | | | | .994 | | | 1,664 | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | Gauge | Other Dull Characteristics | | Reason Pulled | | | | |
| | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | | Torque | | Surveys (Max of 7) | | KOP: | | EOC: | | | | |
| | 144 | 145 | 142 | | | 17 | | Survey Type | | Measured Depth | Inclination | Azimuth | DLS | | | |
| Pumps | | | | | | | | MWD | | 2,311 | 0.920 | 91.180 | 0.288 | | | |
| Make/Model | | | | | | | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | |
| RSF-FB 1600 | | | | | | | | 2,650 | 12 | 6.00 | 90.0 | 95% | 0.1 | 8.5 | | |
| RSF-FB 1600 | | | | | | | | 2,650 | 12 | 6.00 | 90.0 | 95% | 0.1 | 8.6 | | |
| PZ-10 | | | | | | | | | 10 | 6.50 | | 95% | 0.1 | | | |
| Gas | Background Gas | | Connection Gas | | Trip Gas | | Max Gas | | Max At @ | | MWD | | 3,142 | 0.530 | 351.600 | 0.040 |
| | 11 | | 14 | | 0 | | 14 | | 3815 | | MWD | | 3,327 | 0.700 | 1.970 | 0.109 |
| 24.00 | | | Total Hours | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | |
| 12:30 am | 0.50 | 20 | 1,830 | PICK UP TOP IBS & ACCELGLIDE | | | | | | | | | | | | |
| 2:00 am | 1.50 | 6 | 1,830 | TIH TO 1,742' | | | | | | | | | | | | |
| 3:00 am | 1.00 | 5 | 1,830 | FILL PIPE & CIRCULATE AIR OUT WHILE RIGGING UP CELLAR PUMP, PUMPING IT OUT & CLOSING CASING VALVE | | | | | | | | | | | | |
| 3:30 am | 0.50 | 15 | 1,830 | TEST CASING TO 915 PSI (GOOD TEST) | | | | | | | | | | | | |
| 6:00 am | 2.50 | 2 | 1,830 | INSTALL ROTATING HEAD & DRLG FLOAT COLLAR & SHOE TRACK (FIRM CEMENT) | | | | | | | | | | | | |
| 4:00 pm | 10.00 | 2 | 2,664 | DRLG F/1,830' T/2,664' (834' @ 83 FPH) . WOB 25K, RPM 70-80,TRQ 11-15K, GPM 650-750, SPP 2850, DIFF 150-300. SLIDE F/2,111' T/2,128' MTF 345 | | | | | | | | | | | | |
| 4:30 pm | 0.50 | 7 | 2,664 | LUBRICATE RIG | | | | | | | | | | | | |
| 12:00 am | 7.50 | 2 | 3,494 | DRLG F/2,664' T/3,494' (830' @ 111 FPH) . WOB 25K, RPM 70-80,TRQ 11-15K, GPM 650-750, SPP 2850, DIFF 150-300. SLIDE F/2,664' T/2,685' MTF 345 | | | | | | | | | | | | |

| Additional Comments | Mud / Chemical Used Today |
|--|---------------------------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 MUD FUEL: DELIVERED 1,000 GAL (1,000 TOTAL) MUD FUEL: USED 0 GAL (0 TOTAL) RIG DOWN TIME 0 HRS (21 HRS TOTAL) | |
| Crews | |
| Morning | DayEveningRelief |
| | |
| | |
| Diesel | |
| Delivered | TodayTotal |
| On Hand | |
| Used | |
| Ton Miles | |
| Line on Spool: Ft. / Size | |
| Ton Miles: Current / Total | |
| Line Cut: Today / Total | |

| Expenses | | | | | Expenses by Category | |
|-----------------------------------|--------------------------|---|---|-----------|-----------------------------------|-----------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,058.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 6,406.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 8,800.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 17,500.00 |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.55 RIG FUEL | 12,179.00 |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.60 MUD LOGGING & GEO | 1,080.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS0 | 140.00 | 2250.65 SUPERVISION | 3,200.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.70 BITS-SCRAPER & | 45,093.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,672.00 |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 4,473.00 | 2350.40 WELLHEAD | 27,528.00 |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 1 | MUD FUEL | 1,933.00 | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY | 17,500.00 | | |
| 2250.55 RIG FUEL | PILOT THOMAS | 1 | RIG FUEL | 12,179.00 | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | |
| 2250.70 BITS-SCRAPER & | DRILFORMANCE | 1 | 17.5" DF616 | 5,500.00 | | |
| 2250.70 BITS-SCRAPER & | DRILFORMANCE | 2 | ACCELGLIDE | 15,500.00 | | |
| 2250.70 BITS-SCRAPER & | ULTERRA | 1 | 17.5" CF616 | 5,102.00 | | |
| 2250.70 BITS-SCRAPER & | ULTERRA | 2 | 12.25" SPL616 | 18,991.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | 942.00 | | |

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|-----------------------------------|------------------|------------------|--|------------------|-----------|-------------------------|------------|------------|-----------|
| Andrews University 28-33 # 1H | | | | DRILLING REPORT | | Date | 1/28/2020 | Spud | 1/23/2020 |
| : 00004 | | API # 4200348217 | | Throne - Andrews | | Printed | 1/29/2020 | TD'd | |
| 2250.95 DRILLING EQUIPMENT RENTAL | IRON HORSE TOOLS | 1 | DAILY RENTAL SINGLE CHOKE, FLARELINE AND DRIVE OVER. | | 230.00 | | | | |
| 2350.40 WELLHEAD | SWECO | 1 | WELL HEAD | | 27,528.00 | | | | |
| Last Tests: | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | Daily Cost | 125,516.00 | |
| | | | | | | | Cum. Cost | 882,343.00 | |
| | | | | | | | | | |

| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | | | Date | | 1/29/2020 | | Spud | | 1/23/2020 | |
|--|----------------|---|---------------|---|-----------------------------------|-------------|---------------|--------------------|--------------|-----------------------------|----------------------------|---------|---------------|-----------|----------------------------------|-------------|--|-----------|--|
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | | | Printed | | 1/30/2020 | | TD'd | | | |
| Report # | 9 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | | AFE # | | 2019D01 | | | | |
| Depth | 5,150 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | Phone | | | | | AFE-DH | | \$2,633,990 | | | |
| TVD | 5,149 | 'KB' corr | | Phone | 346-444-8591 | | | | Rig Supv | TONY MITCHELL | | | | AFE-Test | | | | | |
| Footage | 1,656 | Ft/Hr | | Lithology | 75%LIMESTONE/10%DOLOMITE/15%SHALE | | | | Phone | 325-450-1134 | | | | AFE-Comp | | | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | | AFE-Total | | | | | | |
| LAST 24 HRS: DRLG 12.25" INT SECTION TO 5,150' 00:00 - 06:00 DRLG F/ 5,150' T/ 5,479' | | | | | | | | Rig Supt | J. WEST | | | | Working Int | | | | | | |
| | | | | | | | | Phone | 325-450-4025 | | | | Net Int | | | | | | |
| NEXT 24 HOURS: DRLG 12.25" INTERMEDIATE SECTION TO KOP, NO ACCIDENTS OR POLLUTION REPORTED | | | | | | | | | | | | | | | | | | | |
| Mud | | | | Mud Company: STELLAR | | | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | | | | |
| WBM | 10.7 | 10.78 | 32 | 4 | 6 | 9 | 12 | 2/32 | 100 | 3.04 | | | | | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | | | | |
| 10 | .2 | .2 | .4 | 180,000 | | | | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | | | | |
| | | | | | | | | 13.375 01/26/20 | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | | | | |
| 3 | 1,190.05 | PDC BIT, 8" 7/8, 5.9, 1.5* ABH MOTOR (0.166 RPG) w/11.75 NBS, 11.75" IBS, NMPC, UBHO, 2- NMDC'S, 11.75" IBS, ACCELGLIDE, XO, 15-6.5" DC'S, XO, 21-5" HW | | | | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | | | | |
| 3 | 1,830 | | 12.250 | ULTERRA | SPL 616 | 49227 | | 9 | | | 0 | | | | | | | | |
| | | | | | | | | .994 | | | 1,664 | | | | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | | Gauge | Other Dull Characteristics | | Reason Pulled | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | | Torque | | Surveys (Max of 7) | | KOP: | | EOC: | | | | | | | |
| | 165 | 167 | 160 | | | 16000 | | Survey Type | | Measured Depth | Inclination | Azimuth | DLS | | | | | | |
| Pumps | | | | | | | | MWD | | 3,880 | | 0.700 | 41.610 | 0.100 | | | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | | 4,065 | 0.570 | 28.340 | 0.106 | | | | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 90.0 | 95% | 0.1 | 8.5 | | MWD | | 4,250 | 0.480 | 26.490 | 0.049 | | | | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 90.0 | 95% | 0.1 | 8.6 | | MWD | | 4,434 | 0.220 | 332.970 | 0.213 | | | | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | MWD | | 4,619 | 0.310 | 289.200 | 0.116 | | | | |
| Gas | Background Gas | Connection Gas | | Trip Gas | | Max Gas | Max At @ | | MWD | | 4,803 | 0.220 | 290.160 | 0.049 | | | | | |
| | 11 | 18 | | | | 12 | 4795 | | MWD | | 4,988 | 0.260 | 259.580 | 0.072 | | | | | |
| 24.00 | | | Total Hours | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 ar | | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | | | | |
| 7:30 am | 7.50 | 2 | 4,233 | DRLG F/3,494' T/4,233' (739' @ 99 FPH) . WOB 25K, RPM 70-80,TRQ 11-15K, GPM 650-750, SPP 3050, DIFF 150-300. | | | | | | | | | | | | | | | |
| 8:00 am | 0.50 | 7 | 4,233 | LUBRICATE RIG | | | | | | | | | | | | | | | |
| 9:00 am | 1.00 | 2 | 4,261 | SLIDE F/4,233' T/4,261' (28' @ 28 FPH) . WOB 35K, GPM 650-750, SPP 3050, DIFF 150-200, MTF 300 | | | | | | | | | | | | | | | |
| 11:00 am | 2.00 | 2 | 4,418 | DRLG F/4,261' T/4,418' (157' @ 79 FPH) . WOB 25K, RPM 70-80,TRQ 11-15K, GPM 650-750, SPP 3350, DIFF 150-300. | | | | | | | | | | | | | | | |
| 12:00 pm | 1.00 | 2 | 4,443 | SLIDE F/4,418' T/4,443' (25' @ 25 FPH) . WOB 35K, GPM 650-750, SPP 3050, DIFF 150-200, MTF 300 | | | | | | | | | | | | | | | |
| 12:00 am | 12.00 | 2 | 5,150 | DRLG F/4,443' T/5,150' (707' @ 59 FPH) . WOB 25-45K, RPM 40-80,TRQ 11-18K, GPM 650-750, SPP 3350-3850, DIFF 2500-450. | | | | | | | | | | | | | | | |

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|--|--------------------------|----------|---|------------|-----------------------------------|-------------------------|----------------------------|------------|---------|-----------|
| Andrews University 28-33 # 1H | | | | | DRILLING REPORT | | Date | 1/29/2020 | Spud | 1/23/2020 |
| : 00004 API # 4200348217 | | | | | Throne - Andrews | | Printed | 1/30/2020 | TD'd | |
| Additional Comments | | | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 MUD FUEL: DELIVERED 1,000 GAL (1,000 TOTAL) MUD FUEL: USED 0 GAL (0 TOTAL) RIG DOWN TIME 0 HRS (21 HRS TOTAL) | | | | | | | | | | |
| | | | | | | | Crews | | | |
| | | | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | | | |
| | | | | | | | Diesel | | | |
| | | | | | | | Today | Total | | |
| | | | | | | | Delivered | 0 | 19,898 | |
| | | | | | | | On Hand | 5,883 | | |
| | | | | | | | Used | 3,171 | 14,015 | |
| | | | | | | | Ton Miles | | | |
| | | | | | | | Line on Spool: Ft. / Size | | | |
| | | | | | | | Ton Miles: Current / Total | | | |
| | | | | | | | Line Cut: Today / Total | | | |
| Expenses | | | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | | | |
| 2250.10 LOCATION & ROAD EXPENSE | UNIVERSITY LANDS | 1 | OFFSITE LEASE CONTRACT | 5,000.00 | 2250.10 LOCATION & ROAD EXPENSE | 5,000.00 | | | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,073.00 | | | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 2,779.00 | | | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.32 TUBULAR/WELLHEAD | 998.00 | | | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.45 DIRECTIONAL | 8,800.00 | | | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.50 DRILLING DAYWORK | 17,500.00 | | | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.60 MUD LOGGING & GEO | 1,080.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS0 | 140.00 | 2250.65 SUPERVISION | 3,200.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,672.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 2,779.00 | | | | | | |
| 2250.32 TUBULAR/WELLHEAD | SMOB SERVICES | 1 | CLEAN DRIFT & TALLY SURF CSG | 998.00 | | | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY | 17,500.00 | | | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | 942.00 | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | IRON HORSE TOOLS | 1 | DAILY RENTAL SINGLE CHOKE, FLARELINE AND DRIVE OVER. | 230.00 | | | | | | |
| Last Tests: | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | Daily Cost | 43,102.00 | | |
| | | | | | | | Cum. Cost | 924,447.00 | | |

| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | | Date | 1/30/2020 Spud | | 1/23/2020 | |
|--|----------------|---|----------------------|---|--------------------------|-------------|---------------|-----------------------------|----------------|--------------|----------------------------|----------------|----------------------------------|-----------|----------|
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | | Printed | 1/31/2020 TD'd | | | |
| Report # | 10 | Prop TD | 20,304 | County | Andrews | | State | TX | Rig | Sendero 15 | | AFE # | 2019D01 | | |
| Depth | 6,555 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | Phone | | | AFE-DH | \$2,633,990 | | |
| TVD | 6,554 | 'KB' corr | | Phone | 346-444-8591 | | | | Rig Supv | IRVIN GARCIA | | AFE-Test | | | |
| Footage | 1,405 | Ft/Hr | | Lithology | 45% SANDSTONE, 55% SHALE | | | | Phone | 325-450-1134 | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | AFE-Total | | | |
| LAST 24 HRS: DRLG 12.25" INT SECTION TO 6,555' 00:00 - 06:00 DRLG F/ 6,555' T/ 6,616' WORK STUCK PIPE AT 6616' | | | | | | | | | Rig Supt | J. WEST | | Working Int | | | |
| | | | | | | | | | Phone | 325-450-4025 | | Net Int | | | |
| NEXT 24 HOURS: DRLG 12.25" INTERMEDIATE SECTION TO KOP, NO ACCIDENTS OR POLLUTION REPORTED | | | | | | | | | | | | | | | |
| Mud | | | Mud Company: STELLAR | | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | |
| WBM | 10.6 | 10.9 | 32 | 4 | 5 | 8 | 11 | 2/32 | 100 | 4.01 | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | |
| 10 | .2 | .2 | .4 | 176,000 | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest |
| | | | | | | | | 13.375 01/26/20 | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | |
| 3 | 1,190.05 | PDC BIT, 8" 7/8, 5.9, 1.5* ABH MOTOR (0.166 RPG) w/11.75 NBS, 11.75" IBS, NMPC, UBHO, 2- NMDC'S, 11.75" IBS, ACCELGLIDE, XO, 15-6.5" DC'S, XO, 21-5" HW | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | |
| 3 | 1,830 | | 12.250 | ULTERRA | SPL 616 | 49227 | | 9 | | | 0 | | | | |
| | | | | | | | | .994 | | | 1,664 | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | | Gauge | Other Dull Characteristics | | Reason Pulled | | |
| | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | | | Surveys (Max of 7) | | KOP: | | EOC: | | | |
| | | | | | | | | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | |
| Pumps | | | | | | | | MWD | | 5,357 | 1.410 | 302.120 | 0.708 | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | 5,542 | 1.670 | 301.680 | 0.141 | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 90.0 | 95% | 0.1 | 8.5 | | MWD | 5,727 | 1.490 | 307.300 | 0.128 | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 90.0 | 95% | 0.1 | 8.6 | | MWD | 5,911 | 1.450 | 309.150 | 0.034 | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | MWD | 6,094 | 1.050 | 291.390 | 0.302 | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | MWD | | 6,278 | 1.010 | 286.820 | 0.050 | | | |
| | 10 | 18 | | 18 | 6181 | | MWD | | 6,463 | 0.920 | 293.330 | 0.077 | | | |
| 24.00 Total Hours | | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | |
| 2:30 am | 2.50 | 2 | 5,316 | DRLG F/5,150' T/5,316' (166' @ 66 FPH) . WOB 40K, RPM 55,TRQ 11-15K, GPM 650-750, SPP 3050, DIFF 150-300. | | | | | | | | | | | |
| 3:30 am | 1.00 | 2 | 5,338 | SLIDE F/5,316' T/5,338' (22' @ 22 FPH) . WOB 35K, GPM 650-750, SPP 3050, DIFF 150-200, MTF 325 | | | | | | | | | | | |
| 10:00 am | 6.50 | 2 | 5,710 | DRLG F/5,338' T/5,710' (372' @ 57 FPH) . WOB 40K, RPM 55,TRQ 11-15K, GPM 650-750, SPP 3050, DIFF 150-300. | | | | | | | | | | | |
| 11:00 am | 1.00 | 2 | 5,720 | SLIDE F/5,710' T/5,720' (10' @ 10 FPH) . WOB 35K, GPM 650-750, SPP 3050, DIFF 150-200, MTF 120 | | | | | | | | | | | |
| 2:30 pm | 3.50 | 2 | 5,986 | DRLG F/5,720' T/5,986' (266' @ 76 FPH) . WOB 40K, RPM 55,TRQ 11-15K, GPM 650-750, SPP 3050, DIFF 150-300. | | | | | | | | | | | |
| 3:00 pm | 0.50 | 7 | 5,986 | LUBRICATE RIG | | | | | | | | | | | |
| 3:30 pm | 0.50 | 2 | 6,005 | DRLG F/5,986' T/6,005' (19' @ 38 FPH) . WOB 40K, RPM 55,TRQ 11-15K, GPM 650-750, SPP 3050, DIFF 150-300. | | | | | | | | | | | |
| 4:00 pm | 0.50 | 2 | 6,025 | SLIDE F/6,005' T/6,025' (20' @ 40 FPH) . WOB 35K, GPM 650-750, SPP 3050, DIFF 150-200, MTF 125 | | | | | | | | | | | |
| 4:30 pm | 0.50 | 2 | 6,080 | DRLG F/6,025' T/6,080' (55' @ 110 FPH) . WOB 40K, RPM 55,TRQ 11-15K, GPM 650-750, SPP 3050, DIFF 150-300. | | | | | | | | | | | |
| 6:00 pm | 1.50 | 8 | 6,080 | TROUBLE SHOOT TOP DRIVE NOT SPINNING, RACK BACK 2 STANDS & CIRCULATE 4 BPM | | | | | | | | | | | |
| 12:00 am | 6.00 | 2 | 6,555 | DRLG F/6,025' T/6,555' (530' @ 88 FPH) . WOB 40K, RPM 55,TRQ 11-15K, GPM 650-750, SPP 3050, DIFF 150-300. | | | | | | | | | | | |

| Additional Comments | Mud / Chemical Used Today |
|--|---------------------------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 MUD FUEL: DELIVERED 800 GAL (1,800 TOTAL) MUD FUEL: USED 0 GAL (0 TOTAL) RIG DOWN TIME 1.5 HRS (22.5 HRS TOTAL) | |
| Crews | |
| Morning | DayEveningRelief |
| | |
| | |
| Diesel | |
| Delivered | TodayTotal |
| | 6,50026,398 |
| On Hand | 8,240 |
| Used | 4,14318,158 |
| Ton Miles | |
| Line on Spool: Ft. / Size | |
| Ton Miles: Current / Total | |
| Line Cut: Today / Total | |

| Expenses | | | | | Expenses by Category | |
|-----------------------------------|--------------------------|---|---|-----------|-----------------------------------|-----------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,073.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 3,148.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.32 TUBULAR/WELLHEAD | 2,460.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.45 DIRECTIONAL | 8,800.00 |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.50 DRILLING DAYWORK | 17,500.00 |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.55 RIG FUEL | 12,572.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS0 | 140.00 | 2250.60 MUD LOGGING & GEO | 1,080.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.65 SUPERVISION | 3,200.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,672.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 1,601.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 1 | MUD FUEL | 1,547.00 | | |
| 2250.32 TUBULAR/WELLHEAD | SMOB SERVICES | 1 | CLEAN DRIFT & TALLY 9.625" CSG | 2,460.00 | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY | 17,500.00 | | |
| 2250.55 RIG FUEL | PILOT THOMAS | 1 | RIG FUEL | 12,572.00 | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | 942.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | IRON HORSE TOOLS | 1 | DAILY RENTAL SINGLE CHOKE, FLARELINE AND DRIVE OVER. | 230.00 | | |

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|-------------------------------|-----------|------------------|-----------|------------------|-----------|-------------------------|-----------|------------|------------|
| Andrews University 28-33 # 1H | | | | DRILLING REPORT | | Date | 1/30/2020 | Spud | 1/23/2020 |
| : 00004 | | API # 4200348217 | | Throne - Andrews | | Printed | 1/31/2020 | TD'd | |
| Last Tests: | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | | Daily Cost | 52,505.00 |
| | | | | | | | | Cum. Cost | 976,952.00 |
| | | | | | | | | | |

| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | Date | 1/31/2020 Spud | | 1/23/2020 | | | | |
|---|----------------|---|----------------|---|-------------------------|-------------|---------------|-----------------------------|--------------|----------------------------|--------------------|---------------|----------------|---------------------|-------------------------|---------------|--|
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | Printed | 2/1/2020 | | TD'd | | | | |
| Report # | 11 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | AFE # | 2019D01 | | | | |
| Depth | 7,184 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | AFE-DH | \$2,633,990 | | | | |
| TVD | 7,183 | 'KB' corr | | Phone | 346-444-8591 | | | Rig Supv | IRVIN GARCIA | | | AFE-Test | | | | | |
| Footage | 629 | Ft/Hr | | Lithology | 70% LIMESTONE 30% SHALE | | | Phone | 325-450-1134 | | | AFE-Comp | | | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | AFE-Total | | | | | |
| LAST 24 HRS: DRLG 12.25" INT SECTION TO 7,184', TOOHP FOR MWD FAILURE 00:00 - 06:00 TOOHP F/ 4,830', LAY DOWN BHA #3, PICKING UP BHA #4 | | | | | | | | Rig Supt | J. WEST | | | Working Int | | | | | |
| | | | | | | | | Phone | 325-450-4025 | | | Net Int | | | | | |
| NEXT 24 HOURS: TIH, DRLG 12.25" INTERMEDIATE SECTION TO KOP, NO ACCIDENTS OR POLLUTION REPORTED | | | | | | | | | | | | | | | | | |
| Mud | | | | Mud Company: STELLAR | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | | |
| WBM | 9.8 | | 30 | 3 | 5 | 7 | 11 | 2/32 | 100 | 4.51 | | | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | | |
| 10 | .2 | .2 | .4 | 71,000 | | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | Casing | | | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | | |
| | | | | | | | | 13.375 01/26/20 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | | |
| 3 | 1,190.05 | PDC BIT, 8" 7/8, 5.9, 1.5* ABH MOTOR (0.166 RPG) w/11.75 NBS, 11.75" IBS, NMPC, UBHO, 2- NMDC'S, 11.75" IBS, ACCELGLIDE, XO, 15-6.5" DC'S, XO, 21-5" HW | | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | | |
| 3 | 1,830 | | 12.250 | ULTERRA | SPL 616 | 49227 | | 9 | | | 629 | | | | | | |
| | | | | | | | | .994 | | | 2,293 | | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | Gauge | Other Dull Characteristics | | Reason Pulled | | | | | |
| | | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | | Drag Up (+) | | Drag Down (-) | | Max Allowed | | Torque | | Surveys (Max of 7) | | KOP: | | EOC: | | |
| | 186 | | 188 | | 179 | | | | 16 | | Survey Type | | Measured Depth | | Inclination Azimuth DLS | | |
| Pumps | | | | | | | | | | MWD | | 6,684 | | 1.010 | | 287.610 0.060 | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | | 6,832 | | 0.920 279.620 0.109 | | | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 90.0 | 95% | 0.1 | 8.5 | | | | | | | | | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 90.0 | 95% | 0.1 | 8.6 | | | | | | | | | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | | | | | | | | |
| Gas | Background Gas | | Connection Gas | | Trip Gas | | Max Gas | | Max At @ | | | | | | | | |
| | 15 | | 14 | | | | 14 | | 6814 | | | | | | | | |
| 24.00 Total Hours Daily Operations Report Time: 12:00 am - 12:00 am | | | | | | | | | | | | | | | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | | |
| 12:30 am | 0.50 | 2 | 6,616 | DRLG F/6,555' T/6,616' (61' @ 122 FPH) . WOB 40K, RPM 55,TRQ 11-15K, GPM 650-750, SPP 3450, DIFF 150-300. | | | | | | | | | | | | | |
| 1:00 am | 0.50 | 2 | 6,616 | ATTEMPT TO SLIDE, LINE UP TOOL FACES & BEGIN SLACKING OFF TO BOTTOM. STRING STUCK 2' OFF BOTTOM & UNABLE TO MOVE, PULL 100K OVER & WORK PIPE | | | | | | | | | | | | | |
| 4:00 am | 3.00 | 22 | 6,616 | WORK PIPE & PUMP SWEEPS PULLING 150K OVER, UNABLE TO FREE UP STRING | | | | | | | | | | | | | |
| 6:00 am | 2.00 | 5 | 6,616 | DECISION MADE TO PUMP DIESEL SWEEP & LET SIT AROUND BHA & WORK PIPE | | | | | | | | | | | | | |
| 7:00 am | 1.00 | 5 | 6,616 | PIPE FREED UP, PUMP HIGH VIS SWEEP & REAM HOLE PRIOR TO GOING BACK TO DRILLING | | | | | | | | | | | | | |
| 2:30 pm | 7.50 | 2 | 7,091 | DRLG F/6,616' T/7,091' (475' @ 63 FPH) . WOB 40K, RPM 55,TRQ 11-15K, GPM 650-750, SPP 3350, DIFF 150-300. | | | | | | | | | | | | | |
| 4:00 pm | 1.50 | 23 | 7,091 | TROUBLESHOOT MWD NOT PULSING. PUMPING F/W SWEEPS, C/O SURFACE EQUIPMENT WITH NO SUCCESS | | | | | | | | | | | | | |
| 6:00 pm | 2.00 | 2 | 7,184 | PUMP SWEEP, DRLG F/ 7,091' T/7,184' (93' @ 47 FPH). WOB 40K, RPM 55,TRQ 11-15K, GPM 650-750, SPP 3350, DIFF 150-300. | | | | | | | | | | | | | |
| 8:00 pm | 2.00 | 5 | 7,184 | FLOWCHECK WELL (WELL STATIC). CIRCULATE BOTTOMS UP (50% SHAKER COVERAGE ON BOTTOMS UP), MIX AND PUMP SLUG PRIOR TO TRIP. | | | | | | | | | | | | | |
| 8:30 pm | 0.50 | 6 | 7,184 | TOOH F/ 7,184' T/ 6,700'. WELL PULLED TIGHT AT 6,700'. ABLE TO PULL 50-60K OVER AND MAKE PROGRESS EACH STROKE, NOT TAKING ANY WEIGHT COMING DOWN. WORKED PIPE TO 6,400' AND STOPPED MAKING PROGRESS. | | | | | | | | | | | | | |
| 11:30 pm | 3.00 | 6 | 7,184 | WASH AND REAM OUT OF HOLE F/ 6,400' T/5,900'. 450-600 GPM, 30-40 RPM. HAD TO BACKREAM SLOWLY (10-30 FPM) TO KEEP TOPDRIVE FROM TORQUING AND STALLING AND WELL FROM PACKING OFF. HOLE CLEANED UP AND WAS ABLE TO BACKREAM FREELY. (MIXED SLUG WHILE B/R) | | | | | | | | | | | | | |
| 12:00 am | 0.50 | 6 | 7,184 | TOOH F/ 5,900' T/ 4830' W/ NO EXCESS DRAG, WELL IS TAKING CALCULATED FILL | | | | | | | | | | | | | |

| Additional Comments | Mud / Chemical Used Today |
|--|---------------------------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 MUD FUEL: DELIVERED 800 GAL (1,800 TOTAL) MUD FUEL: USED 0 GAL (0 TOTAL) RIG DOWN TIME 0 HRS (22.5 HRS TOTAL) | |
| Crews | |
| Morning | DayEveningRelief |
| | |
| | |
| Diesel | |
| Delivered | TodayTotal |
| | 026,398 |
| On Hand | 5,042 |
| Used | 3,19821,356 |
| Ton Miles | |
| Line on Spool: Ft. / Size | |
| Ton Miles: Current / Total | |
| Line Cut: Today / Total | |

| Expenses | | | | | Expenses by Category | |
|-----------------------------------|--------------------------|---|---|-----------|-----------------------------------|-----------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost |
| 2250.105 SURFACE RENTALS | Excel Products | 1 | SUPPLIES FOR CAMP | 233.00 | 2250.105 SURFACE RENTALS | 2,306.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.25 DRILLING MUD & CHEMICALS | 8,242.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.30 TRANSPORTATION | 784.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 8,800.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 17,500.00 |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.60 MUD LOGGING & GEO | 1,080.00 |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.65 SUPERVISION | 3,200.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,672.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 6,695.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 1 | MUD FUEL | 1,547.00 | | |
| 2250.30 TRANSPORTATION | BIG STATE TRUCKING | 1 | TRUCKING FOR 9 5/8 LANDING JT AND BACKHAUL SPOOLS | 784.00 | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY | 17,500.00 | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | 942.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | IRON HORSE TOOLS | 1 | DAILY RENTAL SINGLE CHOKE, FLARELINE AND DRIVE OVER. | 230.00 | | |

| | | | | | | | | | | | | | | | |
|---|----------------|---|------------------|--|--------------------------|------------------------------|----------------|-----------------------------|----------------------------|---------------|------------|---------------|----------------------------------|-----------|----------|
| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | | Date | 2/1/2020 Spud | | 1/23/2020 | |
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | | Printed | 2/2/2020 | | TD'd | |
| Report # | 12 | Prop TD | 20,304 | County | Andrews | | State | TX | Rig | Sendero 15 | | AFE # | 2019D01 | | |
| Depth | 7,630 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | Phone | | | AFE-DH | \$2,633,990 | | |
| TVD | 7,629 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | | Rig Supv | IRVIN GARCIA | | AFE-Test | | | |
| Footage | 446 | Ft/Hr | | Lithology | 60% SHALE, 40% LIMESTONE | | | | Phone | 325-450-1134 | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | AFE-Total | | | |
| LAST 24 HRS: MAKE UP BHA #4, TIH, DRLG 12.25" INT SECTION TO 7,630' 00:00 - 06:00 DRLG 12.25" INT SECTION F/ 7,630' T/ 8,162' | | | | | | | | | Rig Supt | J. WEST | | Working Int | | | |
| | | | | | | | | | Phone | 325-450-4025 | | Net Int | | | |
| NEXT 24 HOURS: DRLG 12.25" INTERMEDIATE SECTION TO KOP, TOO H TO RUN 9 5/8" INTERMEDIATE CASING. NO ACCIDENTS OR POLLUTION REPORTED | | | | | | | | | | | | | | | |
| Mud | | Mud Company: STELLAR | | | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | |
| WBM | 10.2 | 10.48 | 30 | 3 | 5 | 7 | 11 | 2/32 | 100 | 8.49 | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | |
| 10 | .2 | .2 | .4 | 74,000 | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest |
| | | | | | | | | 13.375 01/26/20 | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | |
| 3 | 1,190.05 | PDC BIT, 8" 7/8, 5.9, 1.5* ABH MOTOR (0.166 RPG) w/11.75 NBS, 11.75" IBS, NMPC, UBHO, 2- NMDC'S, 11.75" IBS, ACCELGLIDE, XO, 15-6.5" DC'S, XO, 21-5" HW | | | | | | | | | | | | | |
| 4 | 1,197.76 | PDC BIT, MOTOR, IB STABILIZER, NM PONY, UBHO, MONEL, MONEL, IB STABILIZER, ACCELGLIDE, XO, 15 DRILL COLLARS, XO, 21 HWDPs. | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | |
| 3 | 1,830 | 7,184 | 12.250 | ULTERRA | SPL 616 | 49227 | | 9 | | | 0 | | | | |
| | | | | | | | | .994 | | | 2,293 | | | | |
| 4 | 7,184 | | 12.250 | ULTERRA | CF716 | 51054 | | 7 | | | 0 | | | | |
| | | | | | | | | 1.374 | | | 0 | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | Location | Bearings/Seals | Gauge | Other Dull Characteristics | Reason Pulled | | | | | |
| | 3 | 7,184 | 2 | 2 | MISSING CUTTERS | A | X | 0 | | DTF | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | Surveys (Max of 7) KOP: EOC: | | | | | | | | | |
| | 208 | 215 | 200 | 22 | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | | | | |
| Pumps | | | | | | | | MWD | 7,023 | 1.050 | 272.760 | 0.092 | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | 7,209 | 1.320 | 277.420 | 0.154 | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 80.0 | 95% | 0.1 | 7.6 | | MWD | 7,393 | 1.540 | 276.800 | 0.120 | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 80.0 | 95% | 0.1 | 7.6 | | | | | | | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | | | | | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | | | | | | | | | |
| | 40 | 81 | 195 | 119 | 7603 | | | | | | | | | | |
| 24.00 | | Total Hours | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | |
| 3:00 am | 3.00 | 6 | 7,184 | TOOH F/ 4,830' T/ DIRECTIONAL BHA' W/ NO EXCESS DRAG, WELL IS TAKING CALCULATED FILL | | | | | | | | | | | |
| 5:00 am | 2.00 | 20 | 7,184 | LAY DOWN MONELS AND STABILIZERS DUE TO DAMAGED FACES, L/D ACCELGLIDE, PULL MWD AND FOUND THE POPPIT WAS WASHED OUT. L/D UBHO AND PONY COLLAR. BROKE OFF BIT, GRADED 2-2 WITH MISSING CUTTER ON NOSE AND BROKEN AND CHIPPED CUTTERS ON GAUGE. NO DMG TO MOTOR | | | | | | | | | | | |
| 7:30 am | 2.50 | 20 | 7,184 | CLEAN OFF RIG FLOOR, GATHER DIRECTIONAL BHA. MAKE UP BIT MOTOR, STAB AND PONY COLLAR. MADE UP, BROKE, AND MADE UP NEW CONNECTIONS | | | | | | | | | | | |
| 8:00 am | 0.50 | 7 | 7,184 | SERVICE RIG | | | | | | | | | | | |
| 10:30 am | 2.50 | 20 | 7,184 | PICK UP BHA #4: 12.25" ULTERRA CF716 PDC BIT, 8" 7/8, 5.9, 1.5* ABH MOTOR (0.166 RPG) w/11.75 NBS, 11.75" IBS, NMPC, UBHO, 2- NMDC'S, 11.75" IBS, ACCELGLIDE, XO, 15-6.5" DC'S, XO, 21-5" HWDP | | | | | | | | | | | |
| 11:30 am | 1.00 | 6 | 7,184 | TIH TO SHOE | | | | | | | | | | | |
| 12:30 pm | 1.00 | 9 | 7,184 | SLIP AND CUT DRILL LINE | | | | | | | | | | | |
| 3:30 pm | 3.00 | 6 | 7,184 | TIH F/ SHOE, WELL IS DISPLACING CORRECTLY. TAGGED UP AT 6100' | | | | | | | | | | | |
| 5:30 pm | 2.00 | 6 | 7,184 | WASH AND REAM F/ 6,100' T/ 7,184'. 600 GPM, 60 RPM, 2-5K WOB. DIFF 200 PSI, TQ 4-19K. WASHING IN HOLE AT SLOWER SPEED TO KEEP TOPDRIVE FROM STALLING DUE TO TORQUE | | | | | | | | | | | |
| 12:00 am | 6.50 | 2 | 7,630 | DRLG F/ 7,184' T/7,630' (446' @ 69 FPH). WOB 35-45K, RPM 45,TRQ 15-22K, GPM 650-700, SPP 3450, DIFF 250-450 | | | | | | | | | | | |

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|--|--------------------------|---|---|-----------|-----------------------------------|---------------|-----------|--------|-------|
| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 2/1/2020 Spud | 1/23/2020 | | |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 2/2/2020 TD'd | | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 MUD FUEL: DELIVERED 100 GAL (2,800 TOTAL) MUD FUEL: USED 0 GAL (0 TOTAL) RIG DOWN TIME 0 HRS (22.5 HRS TOTAL) | | | | | | | | | |
| | | | | | Crews | | | | |
| | | | | | Morning | Day | Evening | Relief | |
| | | | | | | | | | |
| | | | | | Diesel | | | Today | Total |
| | | | | | Delivered | 6,100 | 32,498 | | |
| | | | | | On Hand | 9,054 | | | |
| | | | | | Used | 2,088 | 23,444 | | |
| | | | | | Ton Miles | | | | |
| | | | | | Line on Spool: Ft. / Size | | | | |
| Ton Miles: Current / Total | | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,133.00 | | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 3,972.00 | | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.30 TRANSPORTATION | 2,482.00 | | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.45 DIRECTIONAL | 27,500.00 | | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.50 DRILLING DAYWORK | 17,500.00 | | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 2 | H2S PACKAGE | 60.00 | 2250.55 RIG FUEL | 11,635.00 | | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.60 MUD LOGGING & GEO | 1,080.00 | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.65 SUPERVISION | 3,200.00 | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.70 BITS-SCRAPER & | 18,991.00 | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,822.00 | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 2,065.00 | | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 1 | 1000 GALLONS MUD FUEL | 1,907.00 | | | | | |
| 2250.30 TRANSPORTATION | BIG STATE TRUCKING | 1 | TRUCKING FOR AGITATOR | 490.00 | | | | | |
| 2250.30 TRANSPORTATION | BIG STATE TRUCKING | 2 | TRUCKING FOR DIRECTIONAL WITH BACK HAUL | 1,992.00 | | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 27,500.00 | | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY | 17,500.00 | | | | | |
| 2250.55 RIG FUEL | PILOT THOMAS | 2 | 6100 GALLONS RIG FUEL | 11,635.00 | | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | | |
| 2250.70 BITS-SCRAPER & | ULTERRA | 1 | 12.25" CF716 PDC BIT, SN-51054 | 18,991.00 | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 150.00 | | | | | |

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|--|----------------|----------------|--|--|--------------------------|------------------------------|----------------|-------------|----------------------------|------------------|------------|---------|-------------|----------|-------------|------|-----------|
| Andrews University 28-33 # 1H | | | | | | | | | | DRILLING REPORT | | | | Date | 2/2/2020 | Spud | 1/23/2020 |
| : 00004 API # 4200348217 | | | | | | | | | | Throne - Andrews | | | | Printed | 2/3/2020 | TD'd | |
| Report # | 13 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | | AFE # | 2019D01 | | | |
| Depth | 8,854 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | Phone | | | | | AFE-DH | \$2,633,990 | | |
| TVD | 8,854 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | | Rig Supv | IRVIN GARCIA | | | | AFE-Test | | | |
| Footage | 1,224 | Ft/Hr | | Lithology | 80% SHALE, 20% LIMESTONE | | | | Phone | 325-450-1134 | | | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | Rig Supt | J. WEST | | | | AFE-Total | | | | |
| LAST 24 HRS: DRLG 12.25" INT SECTION TO 8,854', CTCH, TOOHP TO RUN CSG | | | | | | | | Phone | 325-450-4025 | | | | Working Int | | | | |
| 00:00 - 06:00 L/D BHA, PULL WEAR BUSH, RIG UP & RUN INTERM CSG | | | | | | | | | | | | | | | | | |
| NEXT 24 HOURS: RUN & CEMENT 9 5/8" INTERMEDIATE CASING. NO ACCIDENTS OR POLLUTION REPORTED | | | | | | | | | | | | | | | | | |
| Mud | | | | | | | | | | | | | | | | | |
| Mud Company: STELLAR | | | | | | | | | | | | | | | | | |
| Mud Engineer: JEFF BRANTLEY | | | | | | | | | | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | | |
| WBM | 8.5 | | 30 | | | | | | | | | | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | | |
| | | | | | | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | | |
| | | | | | | | | 13.375 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | | |
| | | | | | | | | 01/26/20 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | | |
| 4 | 1,197.76 | | PDC BIT, MOTOR, IB STABILIZER, NM PONY, UBHO, MONEL, MONEL, IB STABILIZER, ACCELGLIDE, XO, 15 DRILL COLLARS, XO, 21 HWDPs. | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | | |
| 4 | 7,184 | 8,854 | 12.250 | ULTERRA | CF716 | 51054 | | 7 | | | 1,224 | | | | | | |
| | | | | | | | | 1.374 | | | 1,224 | | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | Location | Bearings/Seals | Gauge | Other Dull Characteristics | Reason Pulled | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | Surveys (Max of 7) KOP: EOC: | | | | | | | | | | | |
| | | | | | | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | | | | | |
| Pumps | | | | | | MWD | | 7,578 | 1.410 | 268.100 | 0.140 | | | | | | |
| Make/Model | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | | 7,763 | 1.320 | 275.220 | 0.104 | | | |
| RSF-FB 1600 | 2,650 | 12 | 6.00 | 80.0 | 95% | 0.1 | 7.6 | | MWD | | 7,948 | 0.920 | 274.960 | 0.216 | | | |
| RSF-FB 1600 | 2,650 | 12 | 6.00 | 80.0 | 95% | 0.1 | 7.6 | | MWD | | 8,133 | 0.570 | 273.900 | 0.189 | | | |
| PZ-10 | | 10 | 6.50 | | 95% | 0.1 | | | | | | | | | | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 24.00 Total Hours | | | | | | | | | | | | | | | | | |
| Daily Operations | | | | | | | | | | | | | | | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | | |
| 2:30 pm | 14.50 | 2 | 8,854 | DRLG F/ 7,630' T/8,854' (1,224' @ 84 FPH). WOB 35-45K, RPM 45,TRQ 15-22K, GPM 650-700,SPP 3450, DIFF 250-450, LOST FULL RETURNS @ 8,640' W/10.6 MUD WT. PUMP FRESH WATER | | | | | | | | | | | | | |
| 4:30 pm | 2.00 | 5 | 8,854 | CIRCULATE HOLE CLEAN PRIOR TO TOOHP TO RUN INTERMEDIATE CSG. PUMP TWO 30 BBL 15 PPB LCM HIGH VIS SWEEPS & RE-GAIN CIRCULATION. CALCULATED 28% WASHOUT FROM CALIPER SWEEP | | | | | | | | | | | | | |
| 9:00 pm | 4.50 | 6 | 8,854 | PUMP SLUG & TOOHP TO 1200', KEEPING HOLE FULL ON TRIP TANK. | | | | | | | | | | | | | |
| 10:00 pm | 1.00 | 6 | 8,854 | HOLD PJSM, RIG UP LAY DOWN TRUCK | | | | | | | | | | | | | |
| 12:00 am | 2.00 | 6 | 8,854 | LAY DOWN HWDPP, DRILL COLLARS AND ACCELGLIDE | | | | | | | | | | | | | |

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|--|--|--------------------------|----------|------------------|---|---------------------------|-------------------------|-------|-----------------------------------|--------------|-----------|--------|--|-------|--|
| Andrews University 28-33 # 1H | | | | DRILLING REPORT | | Date | 2/2/2020 Spud | | 1/23/2020 | | | | | | |
| : 00004 API # 4200348217 | | | | Throne - Andrews | | Printed | 2/3/2020 TD'd | | | | | | | | |
| <div>Additional Comments</div> <div>RR FROM AQUATERRA 2300 HRS 1/16/20</div> <div>60 MILE RIG MOVE</div> <div>RIG MOVE HR 156.5 (6.52 DAYS)</div> <div>SPUD AT 11:30 HRS ON 1/23/20</div> <div>NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED</div> <div>TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260</div> <div>INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4</div> <div>MUD FUEL: DELIVERED 0 GAL (2,800 TOTAL)</div> <div>MUD FUEL: USED 0 GAL (0 TOTAL)</div> <div>RIG DOWN TIME 0 HRS (22.5 HRS TOTAL)</div> | | | | | | Mud / Chemical Used Today | | | | | | | | | |
| | | | | | | Crews | | | | | | | | | |
| | | | | | | Morning | | Day | | Evening | | Relief | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | Diesel | | | | | | Today | | Total | |
| | | | | | | Delivered | | 0 | | 32,498 | | | | | |
| | | | | | | On Hand | | 6,900 | | | | | | | |
| | | | | | | Used | | 2,154 | | 25,598 | | | | | |
| | | | | | | Ton Miles | | | | | | | | | |
| Line on Spool: Ft. / Size | | | | | | | | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | | | | | | | | |
| Expenses | | | | | | Expenses by Category | | | | | | | | | |
| Category | | Company / Vendor | | # | Description | | Cost | | Category | | Cost | | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | | 1 | FOUR LIVING QUARTERS | | 578.00 | | 2250.105 SURFACE RENTALS | | 2,073.00 | | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | | 2 | TRASH TRAILER/ PORTA JOHN | | 45.00 | | 2250.25 DRILLING MUD & CHEMICALS | | 3,375.00 | | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | | 3 | GENERATOR AND TRANSFORMER | | 125.00 | | 2250.45 DIRECTIONAL | | 8,800.00 | | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | | 4 | INTERNET AND COMMUNICATIONS | | 195.00 | | 2250.50 DRILLING DAYWORK | | 17,500.00 | | | | |
| 2250.105 SURFACE RENTALS | | LUCKY HEALTH & SAFETY | | 1 | H2S MONITORING EQUIPMENT | | 60.00 | | 2250.60 MUD LOGGING & GEO | | 1,080.00 | | | | |
| 2250.105 SURFACE RENTALS | | WATERFLEET | | 1 | WATER TREATMENT PLANT FOR CAMP | | 730.00 | | 2250.65 SUPERVISION | | 3,200.00 | | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | | 1 | FOUR LIGHT TOWERS | | 140.00 | | 2250.95 DRILLING EQUIPMENT RENTAL | | 1,822.00 | | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | | 2 | 300 GALLON FUEL TANK | | 25.00 | | | | | | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | | 3 | TWO 6X6 PUMPS | | 160.00 | | | | | | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | | 4 | MANIFOLD | | 15.00 | | | | | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | | STELLAR DRILLING FLUIDS | | 1 | MUD COSTS | | 3,375.00 | | | | | | | | |
| 2250.45 DIRECTIONAL SERVICES | | PREMIER DIRECTIONAL | | 1 | DIRECTIONAL SERVICES | | 8,800.00 | | | | | | | | |
| 2250.50 DRILLING DAYWORK | | SENDERO | | 1 | DAYWORK @ \$17,500/DAY | | 17,500.00 | | | | | | | | |
| 2250.60 MUD LOGGING & GEO | | DATALOG GEOLOGICAL | | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | | 1,080.00 | | | | | | | | |
| 2250.65 SUPERVISION | | RIG UP | | 1 | SUPERVISION | | 1,600.00 | | | | | | | | |
| 2250.65 SUPERVISION | | SIERRA HAMILTON | | 1 | SUPERVISION | | 1,600.00 | | | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | SENDERO | | 2 | FORKLIFT RENTAL | | 200.00 | | | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | HALLIBURTON | | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | | 150.00 | | | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | LUCKY HEALTH & SAFETY | | 1 | 5 FRAC TANKS | | 150.00 | | | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | LARIAT EQUIP & SERVICES | | 1 | MANLIFT RENTAL | | 150.00 | | | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | PASON | | 1 | EDR | | 942.00 | | | | | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | IRON HORSE TOOLS | | 1 | DAILY RENTAL SINGLE CHOKE, FLARELINE AND DRIVE OVER. | | 230.00 | | | | | | | | |
| Last Tests: | | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | | Daily Cost | 37,850.00 | | | | | |
| | | | | | | | | | Cum. Cost | 1,148,791.00 | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|--|----------------|----------------|---------------|---|----------------------|-------------|--|----------------|--------------|-----------------------------|----------------------------|---------|---------------|---------|-------------|---------------|--|-----------|--|
| Andrews University 28-33 # 1H | | | | | | | | | | DRILLING REPORT | | | | Date | | 2/3/2020 Spud | | 1/23/2020 | |
| : 00004 API # 4200348217 | | | | | | | | | | Throne - Andrews | | | | Printed | | 2/4/2020 | | TD'd | |
| Report # | 14 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | | AFE # | | 2019D01 | | | | |
| Depth | 8,854 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | | AFE-DH | | \$2,633,990 | | | | |
| TVD | 8,854 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | Rig Supv | IRVIN GARCIA | | | | AFE-Test | | | | | | |
| Footage | 0 | Ft/Hr | | Lithology | | | | Phone | 325-450-1134 | | | | AFE-Comp | | | | | | |
| Present Operations / Executive Summary | | | | | | | | Rig Supt | J. WEST | | | | AFE-Total | | | | | | |
| LAST 24 HRS: RUN INTERM CSG & CEMENT, LAY OUT LANDING JT, CLEAN PITS 00:00 - 06:00: CLEAN PITS, RIG UP SOLIDS CONTROL, WORK ON TOPDRIVE | | | | | | | | Phone | 325-450-4025 | | | | Working Int | | | | | | |
| NEXT 24 HOURS: RIG UP SOLIDS CONTROL, PICK UP BHA, TIH, DRLG OUT, DISPLACE & DRLG 8.75" CURVE. NO ACCIDENTS OR POLLUTION REPORTED | | | | | | | | | | | | | | | | | | | |
| Mud | | | | Mud Company: STELLAR | | | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | | | | |
| WBM | 8.5 | | 29 | | | | | | | | | | | | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | | | | |
| | | | | | | | | 13.375 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | | | | |
| | | | | | | | | 01/26/20 | | | | | | | | | | | |
| | | | | | | | | 9.625 | | | | | | | | | | | |
| | | | | | | | | 02/03/20 | | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | | Gauge | Other Dull Characteristics | | Reason Pulled | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | | Surveys (Max of 7) KOP: EOC: | | | | | | | | | | | | |
| | | | | | | | Survey Type Measured Depth Inclination Azimuth DLS | | | | | | | | | | | | |
| Pumps | | | | | | | | | | | | | | | | | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | | | | | | | | | | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 80.0 | 95% | 0.1 | 7.6 | | | | | | | | | | | |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 80.0 | 95% | 0.1 | 7.6 | | | | | | | | | | | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | | | | | | | | | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 24.00 Total Hours Daily Operations Report Time: 12:00 am - 12:00 ar | | | | | | | | | | | | | | | | | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | | | | |
| 1:00 am | 1.00 | 20 | 8,854 | LAY OUT BHA & DIRECTIONAL TOOLS, MOTOR DRAINED & BIT GRADED 1:1 | | | | | | | | | | | | | | | |
| 2:00 am | 1.00 | 6 | 8,854 | CLEAR RIG FLOOR, PICK UP A JOINT OF DP & PULL WEAR BUSHING | | | | | | | | | | | | | | | |
| 4:00 pm | 14.00 | 12 | 8,854 | PJSM & RU, RUN INTERM CSG AS FOLLOWS: FLOAT SHOE (8844"), ONE JT, FLOAT COLLAR (8798"), 208 JTS OF 9.625" 40# J55 BTC CSG & FLUTED MANDREL/LANDING JT, 1 BOW SPRING 5' ABOVE & BELOW THE SHOE & COLLAR, 1 ON THE NEXT JT & EVERY 4TH JT TO SFC. RAN 55 CENTR | | | | | | | | | | | | | | | |
| 5:30 pm | 1.50 | 12 | 8,854 | RIG DOWN CASING CREW & LAY DOWN TRUCK, RIG UP CEMENTERS & HOLD PREJOB SAFETY MEETING | | | | | | | | | | | | | | | |
| 10:00 pm | 4.50 | 12 | 8,854 | CMT SURF CSG: TEST LINES TO 3,000 PSI, 40 BBL FW SPACER, LEAD 860 SX @11#, 1.8 YD,545 BBLS, TAIL : 1190 SX @ 14.2#, 1.34 YD, 276 BBLS, DISP. W/667 BBLS OF ACTIVE, FINAL LIFT 750 PSI, BUMPED PLUG @ 1250 PSI. LOST RETURNS 410 BBL INTO DISP. EST. TOC @ 3016' | | | | | | | | | | | | | | | |
| 11:00 pm | 1.00 | 12 | 8,854 | RIG DOWN CEMENT HEAD AND LINES | | | | | | | | | | | | | | | |
| 12:00 am | 1.00 | 12 | 8,854 | BACK OUT LANDING JOINT, SET PACKOFF AND TEST TO 5,000 PSI F/ 15 MINUTES | | | | | | | | | | | | | | | |

| | | | | | | | | |
|---|--------------------------|---|---|-----------|-----------------------------------|---------------|-----------|--------|
| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 2/3/2020 Spud | 1/23/2020 | |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 2/4/2020 TD'd | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 MUD FUEL: DELIVERED 0 GAL (2,800 TOTAL) MUD FUEL: USED 0 GAL (0 TOTAL) RIG DOWN TIME 0 HRS (22.5 HRS TOTAL) | | | | | | | | |
| | | | | | Crews | | | |
| | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | |
| | | | | | Diesel | | | Total |
| | | | | | Delivered | | 32,498 | |
| | | | | | On Hand | 5,838 | | |
| | | | | | Used | | 26,660 | |
| | | | | | Ton Miles | | | |
| | | | | | Line on Spool: Ft. / Size | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,073.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.20 CEMENT & CEMENT SERVICES | 60,556.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.25 DRILLING MUD & CHEMICALS | 2,474.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.30 TRANSPORTATION | 1,802.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.32 TUBULAR/WELLHEAD | 19,951.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.45 DIRECTIONAL | 8,800.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.50 DRILLING DAYWORK | 17,500.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.60 MUD LOGGING & GEO | 1,080.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,822.00 | | |
| 2250.20 CEMENT & CEMENT SERVICES | WEST TEXAS CEMENTERS | 1 | CEMENT INTERMEDIATE CASING | 60,556.00 | 2350.20 INTERMEDIATE | 186,366.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 2,474.00 | | | | |
| 2250.30 TRANSPORTATION | BIG STATE TRUCKING | 1 | TRUCKING FOR DIRECTIONAL TOOLS | 1,802.00 | | | | |
| 2250.32 TUBULAR/WELLHEAD | SOUTHERN CONNECTIONS | 1 | CASING CREW AND CRT STANDBY | 12,475.00 | | | | |
| 2250.32 TUBULAR/WELLHEAD | SWECO | 1 | SET PACKOFF | 1,856.00 | | | | |
| 2250.32 TUBULAR/WELLHEAD | PERMIAN POWER TONG | 1 | LAY DOWN TRUCK | 5,620.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY | 17,500.00 | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | | | |

Andrews University 28-33 # 1H

: 00004 API # 4200348217

DRILLING REPORT

Throne - Andrews

Date

Printed

2/4/2020 Spud

2/5/2020 TD'd

1/23/2020

Report #

15

Prop TD

20,304

County

Andrews

State

TX

Rig

Sendero 15

AFE #

2019D01

Depth

8,900

GL

3,017.0

Co Supv

W. TRAMMELL

Phone

AFE-DH

\$2,633,990

TVD

8,900

'KB' corr

0.0

Phone

346-444-8591

Rig Supv

IRVIN GARCIA

AFE-Test

Footage

46

Ft/Hr

Lithology

Phone

325-450-1134

AFE-Comp

Present Operations / Executive Summary

AFE-Total

LAST 24 HRS: RIG UP SOLIDS CONTROL, WORK ON TOPDRIVE, PICK UP BHA, TIH, TEST CASING, DRILL FLOATS DISPLACE. 00:00 - 06:00 DRLG 8.75" TO KOP, TOO H F/ MWD FAILURE

Rig Supt

J. WEST

Working Int

Phone

325-450-4025

Net Int

NEXT 24 HOURS: TOO H, C/O MWD, TIH, DRLG 8.75" CURVE. NO ACCIDENTS OR POLLUTION REPORTED

Mud

Mud Company: STELLAR

Mud Engineer: JEFF BRANTLEY

Mud Type

M W

ECD

Vis

PV

YP

Gel-Initial

Gel-10 min

Cake

WL

Solids

% Oil

% Water

Mud Losses

OBM

8.45

65

7

5

5

9

1/32

16

5.00

77.00

18.00

0

pH

Pm

Pf

Mf

CL

CA

LCM

Washout(%vol)

Hole Vol

Pit Vol

Stored Vol

Min To Bit

Btms Up

Full Circ

33,000

624

414

1,315

Drill Pipe & Collars (top to bottom)

Kelly Down:

Jts

Length

Size

Wt

ID

Type

Grade

Ann Vel

Size/Date

Top (MD)

Btm (MD)

Btm (TVD)

Wt

Grade

TOC

ShoeTest

13.375

0

1,819

1,819

54.5

J55

0

01/26/20

9.625

0

8,844

8,843

40

J55

3,016

02/03/20

BHA #

Length

Weight

BHA Summary

5

110.24

8.75" NOV SKC513M PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR W/ FBH SET @ 2.12°. FLOAT SUB, NON MAG PONY COLLAR, UBHO, NON MAG FLEX COLLAR, MONEL. TOTAL LENGTH- 110.24'

Bit

#

In @

Out @

Size

Mfg.

Type

Serial #

RPMs

Jets

WOB

BHA Eff

Feet/Ttl

Hrs/Ttl

Ft/Hr

Bit HP

5

8,854

8.750

REED

SKC513 M

A247608

9

0

.994

0

Bit Grade

#

Depth

Inner

Outer

Dull Characteristics

Location

Bearings/Seals

Gauge

Other Dull Characteristics

Reason Pulled

String Loads

Hook Load

Drag Up (+)

Drag Down (-)

Max Allowed

Torque

Surveys (Max of 7)

KOP:

EOC:

Survey Type

Measured Depth

Inclination

Azimuth

DLS

Pumps

Make/Model

PSI

Stroke

Liner

SPM

Eff.

GPS

GPM

SPR

RSF-FB 1600

2,650

12

6.00

80.0

95%

0.1

7.6

RSF-FB 1600

2,650

12

6.00

80.0

95%

0.1

7.6

PZ-10

10

6.50

95%

0.1

Gas

Background Gas

Connection Gas

Trip Gas

Max Gas

Max At @

24.00

Total Hours

Daily Operations

Report Time: 12:00 am - 12:00 am

End

Hours

Code

Depth

Operations

9:00 am

9.00

24

8,854

CLEAN PITS. RIG UP TRANSFER PUMPS, FILL MUD TANKS WITH OBM. REMOVE FLOWLINES TO RESERVE, SET AND RIG UP SOLIDS CONTROL EQUIPMENT, DIESEL TO PITS, SET AND RIG UP SUPERVAC

12:30 pm

3.50

20

8,854

MAKE UP BHA #5: 8.75" NOV SKC513M PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR W/ FBH SET @ 2.12°. FLOAT SUB, NON MAG PONY COLLAR, UBHO, NON MAG FLEX COLLAR, MONEL. TOTAL LENGTH- 110.24'

2:00 pm

1.50

6

8,854

FOUND CRACK IN ELEVATOR LATCH. WHILE WAITING ON NEW SET OF ELEVATORS, MADE UP AND RACKED BACK STANDS OF DRILL PIPE USING SINGLE LATCH ELEVATORS

2:30 pm

0.50

7

8,854

SERVICE RIG

7:30 pm

5.00

6

8,854

TIH T/ 7858', WINDY CONDITIONS IS BLOWING SERVICE LOOP IN DERRICK

9:30 pm

2.00

6

8,854

MAKE UP SINGLE JTS AND TIH T/ 8798'

10:30 pm

1.00

15

8,854

TEST CASING TO 1500 PSI F/ 30 MINUTES

11:00 pm

0.50

2

8,854

DRILL FLOAT COLLAR @ 8,798', FIRM CEMENT AND SHOE @ 8,842' (450 GPM, 10-15WOB, 25 RPM)

12:00 am

1.00

2

8,900

DRILL 8.75" HOLE F/ 8,854' T/ 8,900' (46' @ 24 FPH) WHILE DISPLACING WELL WITH 8.5# OIL BASE MUD. 600 GPM, 15-20 WOB, 25 RPM, 300 DIFF, 9K TQ

| | | | | | | | | |
|--|--------------------------|---|---|-----------|-----------------------------------|---------------|-----------|--------|
| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 2/4/2020 Spud | 1/23/2020 | |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 2/5/2020 TD'd | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 MUD FUEL: DELIVERED 1000 GAL (3,800 TOTAL) MUD FUEL: USED 0 GAL (0 TOTAL) RIG DOWN TIME 0 HRS (22.5 HRS TOTAL) | | | | | | | | |
| | | | | | Crews | | | |
| | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | |
| | | | | | Diesel | | | |
| | | | | | Today | Total | | |
| | | | | | Delivered | 6,300 | 38,798 | |
| | | | | | On Hand | 10,754 | | |
| | | | | | Used | 1,384 | 28,044 | |
| | | | | | Ton Miles | | | |
| Line on Spool: Ft. / Size | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,073.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 2,867.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 27,100.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 17,820.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.55 RIG FUEL | 12,042.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.70 BITS-SCRAPER & | 31,500.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 2,097.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 956.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 1 | 1000 GAL OF MUD FUEL | 1,911.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 27,100.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | | | |
| 2250.55 RIG FUEL | PILOT THOMAS | 1 | 6300 GAL OF RIG FUEL | 12,042.00 | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.70 BITS-SCRAPER & | NOV DOWNHOLE | 1 | 8.75" NOV SKC513M, SN-A247608 | 13,000.00 | | | | |
| 2250.70 BITS-SCRAPER & | ULTERRA | 1 | CF616 SN 47947 DBR CHARGE MINUS RENTAL | 18,500.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | | | |

| | | | | | | | | | | | | | | | |
|--|----------------|--|---------------|---|----------------------|--------------------|----------------|-----------------------------|----------------------------|---------------|------------|---------------|-------------|----------------------------------|----------|
| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | | Date | 2/5/2020 Spud | | 1/23/2020 | |
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | | Printed | 2/6/2020 | | TD'd | |
| Report # | 16 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | AFE # | 2019D01 | | |
| Depth | 9,077 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | AFE-DH | \$2,633,990 | | |
| TVD | 9,075 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | Rig Supv | IRVIN GARCIA | | | AFE-Test | | | |
| Footage | 177 | Ft/Hr | | Lithology | 100% SHALE | | | Phone | 325-450-1134 | | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | Phone | 325-450-1134 | | | AFE-Total | | | |
| LAST 24 HRS: DRILLED TO KOP, TRIPPED FOR MWD FAILURE, DRILL CURVE F/ 8,944' T/ 9,077'. 00:00 - 06:00 DRILL CURVE F/ 9,077' T/ 9,200' | | | | | | | | Rig Supt | J. WEST | | | Working Int | | | |
| | | | | | | | | Phone | 325-450-4025 | | | Net Int | | | |
| NEXT 24 HOURS: DRLG 8.75" CURVE AND LATERAL. NO ACCIDENTS OR POLLUTION REPORTED | | | | | | | | | | | | | | | |
| Mud | | | | Mud Company: STELLAR | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | |
| OBM | 8.5 | 8.83 | 64 | 7 | 6 | 5 | 9 | 1/32 | | 3.63 | 77.00 | 18.00 | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | |
| | | | | 34,000 | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest |
| | | | | | | | | 13.375 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 |
| | | | | | | | | 01/26/20 | | | | | | | |
| | | | | | | | | 9.625 | | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 |
| | | | | | | | | 02/03/20 | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | |
| 5 | 110.24 | 8.75" NOV SKC513M PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR W/ FBH SET @ 2.12°. FLOAT SUB, NON MAG PONY COLLAR, UBHO, NON MAG FLEX COLLAR, MONEL. TOTAL LENGTH- 110.24' | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | |
| 5 | 8,854 | | 8.750 | REED | SKC513 M | A247608 | | 9 | | | 0 | | | | |
| | | | | | | | | .994 | | | 0 | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | Location | Bearings/Seals | Gauge | Other Dull Characteristics | Reason Pulled | | | | | |
| | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | Surveys (Max of 7) | | KOP: | | EOC: | | | | | |
| | 186 | 205 | 175 | | | Survey Type | | Measured Depth | Inclination | Azimuth | DLS | | | | |
| Pumps | | | | | | MWD | | 8,317 | 0.220 | 228.200 | 0.242 | | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | | 8,502 | 0.310 | 215.280 | 0.058 |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 80.0 | 95% | 0.1 | 7.6 | | MWD | | 8,686 | 0.000 | 0.000 | 0.168 |
| RSF-FB 1600 | | 2,650 | 12 | 6.00 | 80.0 | 95% | 0.1 | 7.6 | | MWD | | 8,776 | 0.310 | 27.020 | 0.344 |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | MWD | | 8,880 | 0.350 | 305.720 | 0.414 |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | MWD | | 8,901 | 0.260 | 280.940 | 0.751 | | | | |
| | 28 | 32 | | 71 | 9074 | MWD | | 8,993 | 3.650 | 207.550 | 3.896 | | | | |
| 24.00 | | Total Hours | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | |
| 12:30 am | 0.50 | 2 | 8,944 | DRILL 8.75" HOLE F/ 8,900' T/ 8,944' (44' @ 88 FPH) WHILE DISPLACING WELL WITH 8.5# OIL BASE MUD. 600 GPM, 15-20 WOB, 25 RPM, 300 DIFF, 9K TQ | | | | | | | | | | | |
| 2:30 am | 2.00 | 20 | 8,944 | TROUBLESHOOT MWD TOOL NOT WORKING, RECYCLE PUMPS & CHANGE OUT TRANSDUCER | | | | | | | | | | | |
| 3:00 am | 0.50 | 5 | 8,944 | PUMPS SWEEP IN ATTEMPT TO CLEAR TOOL WITHOUT SUCCESS | | | | | | | | | | | |
| 8:30 am | 5.50 | 6 | 8,944 | TOOH FOR MWD FAILURE | | | | | | | | | | | |
| 10:30 am | 2.00 | 6 | 8,944 | LAY OUT TOP MONEL & RETRIEVE MWD, NO VISUAL SIGNS OF WHY TOOL WASNT WORKING | | | | | | | | | | | |
| 11:30 am | 1.00 | 6 | 8,944 | CHANGE OUT MULE SHOE, INSTALL MWD & TEST (GOOD SURFACE TEST) | | | | | | | | | | | |
| 5:00 pm | 5.50 | 6 | 8,944 | HOLD SAFETY MEETING OVER COLD WEATHER & SNOW, TIH FILLING EVERY 30 STANDS, | | | | | | | | | | | |
| 12:00 am | 7.00 | 2 | 9,077 | DRILL 8.75" CURVE F/ 8,944' T/ 9,077' (133' @ 19 FPH). 550-700 GPM, 28-3,000 PSI, 2-300 DIFF, 15-30 WOB. NOT ABLE TO CONTROL TOOLFACE WITH MORE THAN 20K WOB AND 300 DIFF. | | | | | | | | | | | |

| | | | | | | | | |
|--|--------------------------|---|---|-----------|-----------------------------------|---------------|---------|-----------|
| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 2/5/2020 Spud | | 1/23/2020 |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 2/6/2020 TD'd | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 MUD FUEL: DELIVERED 0 GAL (3,800 TOTAL) MUD FUEL: USED 800 GAL (800 TOTAL) MUD FUEL REMAINING: 3,000 GAL RIG DOWN TIME 0 HRS (22.5 HRS TOTAL) | | | | | | | | |
| | | | | | Crews | | | |
| | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | |
| | | | | | Diesel | | | |
| | | | | | Today | | Total | |
| | | | | | Delivered | | 38,798 | |
| | | | | | On Hand | 8,569 | | |
| | | | | | Used | | 30,229 | |
| | | | | | Ton Miles | | | |
| Line on Spool: Ft. / Size | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,073.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 10,362.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 8,800.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 17,820.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | CHIEF OILFIELD SERVICES | 1 | SHAKER SCREENS | 5,300.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 2,312.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | JOHNSON SPECIALTY TOOLS | 4 | 1" DIESEL TRANSFER PUMP | 35.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | 942.00 | | | | |

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|---|----------------|---|----------------------|---|--------------------------|-------------|------------------------------|------------------|-----------------------------|----------------------------|------------|---------------|----------------------------------|-----------|----------|
| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | | Date | 2/6/2020 Spud | | 1/23/2020 | |
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | | Printed | 2/7/2020 | | TD'd | |
| Report # | 17 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | AFE # | 2019D01 | | |
| Depth | 9,235 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | AFE-DH | \$2,633,990 | | |
| TVD | 9,228 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | Rig Supv | IRVIN GARCIA | | | AFE-Test | | | |
| Footage | 158 | Ft/Hr | | Lithology | 85% SHALE, 15% LIMESTONE | | | Phone | 325-450-1134 | | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | Phone | 325-450-1134 | | | AFE-Total | | | |
| LAST 24 HRS: DRILL CURVE F/ 9,077' T/ 9,212', CTCH, TOO H FOR 2.38 MOTOR & 613 BIT, C/O BHA, TIH & DRLG CURVE TO 9,235' 00:00 - 06:00 | | | | | | | | Rig Supt | J. WEST | | | Working Int | | | |
| DRILL CURVE F/ 9,235' T/ 9,515' | | | | | | | | Phone | 325-450-4025 | | | Net Int | | | |
| NEXT 24 HOURS: DRLG 8.75" CURVE AND LATERAL. NO ACCIDENTS OR POLLUTION REPORTED | | | | | | | | | | | | | | | |
| Mud | | | Mud Company: STELLAR | | | | | | Mud Engineer: JEFF BRANTLEY | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | |
| OBM | 8.55 | | 57 | 12 | 5 | 5 | 9 | 1/32 | | 3.90 | 76.50 | 18.00 | 0 | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | |
| | | | | 39,000 | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest |
| | | | | | | | | 13.375 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 |
| | | | | | | | | 01/26/20 | | | | | | | |
| | | | | | | | | 9.625 | | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 |
| | | | | | | | | 02/03/20 | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | |
| 6 | 104.95 | 8.75" HALLIBURTON GTD64DUO PDC BIT, 6.75" 7/8 LOBE 5.0 STAGE SLICK MUD MOTOR ADJ SET @ 2.38°. FLOAT SUB, NON MAG PONY COLLAR, UBHO, NON MAG FLEX COLLAR, MONEL. TOTAL LENGTH- 104.98' | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | |
| 5 | 8,854 | 9,212 | 8.750 | REED | SKC513 M | A247608 | | 9 | | | 135 | | | | |
| | | | | | | | | .994 | | | 135 | | | | |
| 6 | 9,212 | | 8.750 | HALLIBU RTON | GTD64D UO | 13418535 | | 6 | | | 0 | | | | |
| | | | | | | | | .902 | | | 0 | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | Gauge | Other Dull Characteristics | | Reason Pulled | | | |
| | 5 | 9,212 | 1 | 1 | BROKEN CUTTERS | | N | X | 1 | BROKEN CUTTERS | | BHA | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | | Surveys (Max of 7) KOP: EOC: | | | | | | | | |
| | 186 | 206 | 175 | | | | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | | |
| Pumps | | | | | | | | MWD | | 9,040 | 6.330 | 194.800 | 6.137 | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | 9,086 | 9.630 | 193.040 | 7.193 | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | MWD | 9,132 | 10.860 | 196.120 | 2.926 | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | MWD | 9,178 | 13.760 | 197.700 | 6.346 | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | | | | | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | | | | | | | | | |
| | 42 | 136 | 3701 | 95 | 9226 | | | | | | | | | | |
| 24.00 | | Total Hours | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | |
| 7:00 am | 7.00 | 2 | 9,212 | DRILL 8.75" CURVE F/ 9,077' T/ 9,212' (135' @ 19 FPH). 550-700 GPM, 28-3,000 PSI, 2-300 DIFF, 15-30 WOB. NOT ABLE TO CONTROL TOOLFACE WITH MORE THAN 20K WOB AND 300 DIFF. | | | | | | | | | | | |
| 8:30 am | 1.50 | 5 | 9,212 | CIRCULATE BOTTOMS UP WHILE BUILDING SLUG, PREPARE FLOOR TO TOO H DUE TO LOW BUILD RATES | | | | | | | | | | | |
| 2:30 pm | 6.00 | 6 | 9,212 | FLOW CHECK & TOO H FOR BIGGER MOTOR & 6 BLADE HALLIBURTON BIT | | | | | | | | | | | |
| 4:30 pm | 2.00 | 20 | 9,212 | BREAK TOP MONEL & PULL MWD, LAY OUT CURVE BHA, BIT GRADED A 1:1 | | | | | | | | | | | |
| 6:00 pm | 1.50 | 20 | 9,212 | PICK UP BHA #6 AS FOLLOWS:8.75" NOV GTD64DUO PDC BIT, 6.75" 7/8 LOBE 5.0 STAGE SLICK MUD MOTOR ADJ SET @ 2.38°. FLOAT SUB, NON MAG PONY COLLAR, UBHO, NON MAG FLEX COLLAR, MONEL. TOTAL LENGTH- 104.98' | | | | | | | | | | | |
| 11:00 pm | 5.00 | 6 | 9,212 | SET ROTATING HEAD, TIH 30 STDS, TEST MWD, TIH T/ 9,212' MONITORING HOLE DISPLACEMENT | | | | | | | | | | | |
| 12:00 am | 1.00 | 2 | 9,233 | DRILL 8.75" CURVE F/ 9,212' T/ 9,235' (23' @ 23 FPH). 560 GPM, 2,800 PSI, 250 DIFF, 30 WOB. | | | | | | | | | | | |

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|--|--------------------------|---|---|-----------|-----------------------------------|---------------|---------|-----------|
| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 2/6/2020 Spud | | 1/23/2020 |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 2/7/2020 TD'd | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 MUD FUEL: DELIVERED 4500 GAL (8,300 TOTAL) MUD FUEL: USED 2200 GAL (800 TOTAL) MUD FUEL REMAINING: 5,300 GAL RIG DOWN TIME 0 HRS (22.5 HRS TOTAL) | | | | | | | | |
| | | | | | Crews | | | |
| | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | Diesel | | | |
| | | | | | Delivered | Today | Total | |
| | | | | | On Hand | 9,527 | | |
| | | | | | Used | 1,542 | 31,771 | |
| | | | | | Ton Miles | | | |
| Line on Spool: Ft. / Size | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,073.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 21,901.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 26,679.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 17,820.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.55 RIG FUEL | 4,728.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.70 BITS-SCRAPER & | 12,500.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.90 MISC. LABOR AND SERVICES | 575.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STANDARD TRUCKING | 1 | MOVE RESERVE FLUIDS | 3,252.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 7,389.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 2 | 4500 GAL OF MUD FUEL | 8,510.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 26,679.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | | | |
| 2250.55 RIG FUEL | PILOT THOMAS | 1 | 2500 GAL OF RIG FUEL | 4,728.00 | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.70 BITS-SCRAPER & | HALLIBURTON | 1 | 8.75" GTD64DUO PDC | 12,500.00 | | | | |
| 2250.90 MISC. LABOR AND SERVICES | PEREZ BACKHOE | 1 | BUILD BERMS AROUND MUD FARM | 575.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | |

| | | | | | | | | | | | | | | | |
|---|----------------|--|---------------|---|--------------------------|-------------|--------------------|-----------------------------|--------------|---------------|-----------------|---------------|---------------|----------------------------------|----------|
| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | | Date | 2/7/2020 Spud | | 1/23/2020 | |
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | | Printed | 2/8/2020 | | TD'd | |
| Report # | 18 | Prop TD | 20,304 | County | Andrews | | State | TX | Rig | Sendero 15 | | AFE # | 2019D01 | | |
| Depth | 9,870 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | Phone | | | AFE-DH | \$2,633,990 | | |
| TVD | 9,591 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | | Rig Supv | TONY MITCHELL | | AFE-Test | | | |
| Footage | 635 | Ft/Hr | | Lithology | 80% SHALE/ 20% LIMESTONE | | | | Phone | 325-450-1134 | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | AFE-Total | | | |
| LAST 24 HRS: DRILL CURVE F/ 9,235' T/ 9,870', CTCH, TOO H FOR LATERAL ASSEMBLY, P/U BHA #7 00:00 - 06:00: P/U BHA#7, TIH TO DRILL LATERAL | | | | | | | | Rig Supt | J. WEST | | Working Int | | | | |
| | | | | | | | | Phone | 325-450-4025 | | Net Int | | | | |
| NEXT 24 HOURS: TIH TO SHOE, CUT DRILL LINE, WORK ON DRAWWORKS, TIH, DRILL 8.5" LATERAL. NO ACCIDENTS OR POLLUTION REPORTED | | | | | | | | | | | | | | | |
| Mud | | Mud Company: STELLAR | | | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | |
| OBM | 8.6 | | 56 | 10 | 8 | 5 | 9 | 1/32 | 15 | 4.40 | 75.50 | 18.50 | 46 | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | |
| | | | | 39,000 | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest |
| | | | | | | | | 13.375 01/26/20 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 |
| | | | | | | | | 9.625 02/03/20 | | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 |
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| BHA # | | Length | Weight | BHA Summary | | | | | | | | | | | |
| 7 | 3,184.95 | 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NMPC, UBHO, 2 X MONELS, 33 STDS 5" DP, AGITATOR. LENGTH- 3184.95' | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | |
| 6 | 9,212 | 9,870 | 8.750 | HALLIBU RTON | GTD64D UO | 13418535 | | 6 .902 | | | 0 0 | | | | |
| 7 | 9,870 | | 8.750 | ULTERRA | SPL 616 | 50918 | | 9 .994 | | | 0 0 | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | Gauge | Other Dull | Characteristics | | Reason Pulled | | |
| | 6 | 9,870 | 1 | 1 | NO WEAR | | A | X | 0 | | | BHA | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | | Surveys (Max of 7) | | KOP: | | EOC: | | | | |
| | | | | | | | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | | |
| Pumps | | | | | | | | MWD | | 9,502 | 45.626 | 171.511 | 11.621 | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | 9,549 | 50.418 | 170.457 | 10.329 | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | MWD | 9,595 | 55.824 | 171.599 | 11.920 | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | MWD | 9,641 | 60.923 | 171.780 | 11.090 | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | MWD | 9,688 | 66.506 | 173.357 | 12.252 | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | MWD | | 9,734 | 72.396 | 173.972 | 12.866 | | | |
| | 37 | 110 | | 134 | 9588 | | MWD | | 9,780 | 79.165 | 174.412 | 14.745 | | | |
| 24.00 | | Total Hours | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | |
| 1:00 am | 1.00 | 2 | 9,284 | DRILL 8.75" CURVE F/ 9,212' T/ 9,235' (23' @ 23 FPH). 560 GPM, 2,800 PSI, 250 DIFF, 30 WOB. | | | | | | | | | | | |
| 1:30 am | 0.50 | 23 | 9,284 | SWAP SHAKER SCREENS WITH HOLES THAT CARE CAUSING TROUGH TO FILL WITH CUTTINGS & OVER FLOW | | | | | | | | | | | |
| 1:00 pm | 11.50 | 2 | 9,870 | DRILL 8.75" CURVE F/ 9,235' T/ 9,870' (635' @ 55 FPH). 560 GPM, 2,800 PSI, 250 DIFF, 30 WOB. CUREVE LANDE3D @ 9,870' 92 DEG PROJECTED AT THE BIT | | | | | | | | | | | |
| 2:30 pm | 1.50 | 5 | 9,870 | CIRCULATE HOLE CLEAN PRIOR TO TOO H FOR LATERAL BHA | | | | | | | | | | | |
| 3:00 pm | 0.50 | 6 | 9,870 | PUMP 40 BBL SLUG & PULL 12 STANDS BACK UP TO THE 9.625" SHOE WITH NO DRAG | | | | | | | | | | | |
| 3:30 pm | 0.50 | 5 | 9,870 | FLOW CHECK (WELL IS FLOWING) SPOT FIRST SLUG OUTSIDE PIPE INSIDE CASING SHOE & PUMP SLUG, WELL IS STATIC | | | | | | | | | | | |
| 5:00 pm | 1.50 | 6 | 9,870 | TOOH TO 5,000' MONTIORING HOLE FILL ON TRIP TANK | | | | | | | | | | | |
| 7:00 pm | 2.00 | 6 | 9,870 | ADJUST BREAKS & FLOW CHECK WELL (WELL IS FLOWING 3 BBLS AN HOUR) BUILD SLUG & SPOT 40 BBL SLUG OUT OF PIPE WITH 40 BBL SLUG IN PIPE | | | | | | | | | | | |
| 9:30 pm | 2.50 | 6 | 9,870 | TOOH F/ 5085' T/ BHA, MONITORING WELL AT TRIP TANK. PULL ROTATING HEAD | | | | | | | | | | | |
| 11:30 pm | 2.00 | 6 | 9,870 | PULL MWD, LAY DOWN FLEX COLLAR AND MUD MOTOR. GRADED BIT 1-1, NO WEAR. HELD SAFETY MEETING WITH CREW ON PROPER CHOKE ALIGNMENT | | | | | | | | | | | |
| 12:00 am | 0.50 | 6 | 9,870 | PICK UP BHA #7 AS FOLLOWS: 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NON MAG PONY COLLAR, UBHO, 2 X MONEL COLLARS, 33 STANDS 5" DP, AGITATOR. TOTAL LENGTH- 3184.95' | | | | | | | | | | | |

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| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 2/7/2020 Spud | | 1/23/2020 |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 2/8/2020 TD'd | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 MUD FUEL: DELIVERED 5501 GAL (13,801 TOTAL) MUD FUEL: USED 1801 GAL (3,000 TOTAL) MUD FUEL REMAINING: 5,300 GAL RIG DOWN TIME 0 HRS (22.5 HRS TOTAL) | | | | | | | | |
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| Line on Spool: Ft. / Size | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,073.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 23,726.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.30 TRANSPORTATION | 290.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.45 DIRECTIONAL | 8,800.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.50 DRILLING DAYWORK | 17,820.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.55 RIG FUEL | 3,486.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.70 BITS-SCRAPER & | 13,862.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 10,322.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 1 | 5501 GAL OF MUD FUEL | 10,654.00 | | | | |
| 2250.30 TRANSPORTATION | BIG STATE TRUCKING | 1 | DELIVER FLOAT EQUIPMENT | 290.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | | | |
| 2250.55 RIG FUEL | PILOT THOMAS | 1 | 1800 GAL OF RIG FUEL | 3,486.00 | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.70 BITS-SCRAPER & | ULTERRA | 1 | 8.50" SPL616 PDC BIT, SN-50918 | 13,862.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 150.00 | | | | |

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| Andrews University 28-33 # 1H | | | DRILLING REPORT | | | Date | 2/7/2020 | Spud | 1/23/2020 |
| : 00004 API # 4200348217 | | | Throne - Andrews | | | Printed | 2/8/2020 | TD'd | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | JOHNSON SPECIALTY TOOLS | 4 | 1" DIESEL TRANSFER PUMP | | 35.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | | 942.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | IRON HORSE TOOLS | 1 | DAILY RENTAL SINGLE CHOKE, FLARELINE AND DRIVE OVER. | | 230.00 | | | | |
| Last Tests: | | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | Daily Cost | 77,444.00 |
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| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | | Date | 2/8/2020 Spud | | 1/23/2020 | |
|--|----------------|----------------------|--|--|--------------------------|------------------------------|----------------|-----------------------------|----------------------------|---------------|---------------|---------------|-------------|----------------------------------|----------|
| : 00004 | | API # 4200348217 | | | | Throne - Andrews | | | Printed | | 2/9/2020 TD'd | | | | |
| Report # | 19 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | AFE # | 2019D01 | | |
| Depth | 9,870 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | AFE-DH | \$2,633,990 | | |
| TVD | 9,591 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | Rig Supv | TONY MITCHELL | | | AFE-Test | | | |
| Footage | 0 | Ft/Hr | | Lithology | 80% SHALE, 20% LIMESTONE | | | Phone | 325-450-1134 | | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | AFE-Total | | | |
| LAST 24 HRS: P/U BHA#7, TIH, CUT DRLG LINE, WAIT ON AND REPLACE DWORKS BRAKES. WORK ON DRAWWORKS BRAKES, WAIT ON WELDER TO REPAIR 00:00 - 06:00- WAIT ON OIL WORKS INT. AND WELDER TO ARRIVE TO LOC. | | | | | | | | Rig Supt | J. WEST | | | Working Int | | | |
| | | | | | | | | Phone | 325-450-4025 | | | Net Int | | | |
| NEXT 24 HRS:REPAIR DRAWWORKS LEBUS GROOVE SLEEVES, TIH, DRILL 8 1/2" LATERAL | | | | | | | | | | | | | | | |
| Mud | | Mud Company: STELLAR | | | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | |
| OBM | 8.6 | | 56 | 10 | 8 | 5 | 9 | 1/32 | 14 | 4.45 | 75.50 | 18.50 | 0 | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | |
| | | | | 38,000 | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest |
| | | | | | | | | 13.375 01/26/20 | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | |
| | | | | | | | | 9.625 02/03/20 | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 | |
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| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | |
| 7 | 3,184.95 | | 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NMPC, UBHO, 2 X MONELS, 33 STDS 5" DP, AGITATOR. LENGTH- 3184.95' | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | |
| 7 | 9,870 | | 8.750 | ULTERRA | SPL 616 | 50918 | | 9 | | | 0 | | | | |
| | | | | | | | | .994 | | | 0 | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | Location | Bearings/Seals | Gauge | Other Dull Characteristics | Reason Pulled | | | | | |
| | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | Surveys (Max of 7) KOP: EOC: | | | | | | | | | |
| | | | | | | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | | | |
| Pumps | | | | | | | | | | | | | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | | | | | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | | | | | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | | | | | | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | | | | | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | | | | | | | | | |
| | 56 | | | 134 | 9588 | | | | | | | | | | |
| 24.00 | | Total Hours | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | |
| 2:00 am | 2.00 | 6 | 9,870 | PICK UP BHA #7 AS FOLLOWS: 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NON MAG PONY COLLAR, UBHO, 2 X MONEL COLLARS, 33 STANDS 5" DP, AGITATOR. TOTAL LENGTH- 3184.95' | | | | | | | | | | | |
| 8:00 am | 6.00 | 6 | 9,870 | SET ROTATING HEAD, TIH 33 STDS. TEST MWD AND PICK UP AGITATOR. PRESSURE DROP WAS 343 PSI AFTER PICKING UP AGITATOR. TIH TO SHOE, MONITORING DISPLACEMENT | | | | | | | | | | | |
| 10:00 am | 2.00 | 9 | 9,870 | HANG OFF BLOCKS AND CUT 120' OF DRILL LINE | | | | | | | | | | | |
| 4:00 pm | 6.00 | 8 | 9,870 | ATTEMPTED TO ADJUST DRAWWORKS BRAKES AND FLIP LINKAGE TO EXTEND BRAKES TO END OF WELL. THE MECHANIC FOUND THE BRAKES WERE WORN UNEVEN AND HAD TO BE REPLACED. HAD TO DRESS OUT NEW SET OF BRAKE PADS IN ODESSA. WAITING ON BRAKE BANDS | | | | | | | | | | | |
| 6:00 pm | 2.00 | 8 | 9,870 | INSTALL AND ADJUST NEW BRAKE BANDS. WHILE BURNING IN NEW BRAKES, BOTH HALVES OF THE LEBUS GROOVE SLEEVES BROKE LOOSE AND FELL OFF DRUM. ONE SLEEVE WAS BENT AND ONE HAS CRACK. | | | | | | | | | | | |
| 12:00 am | 6.00 | 8 | 9,870 | WAIT ON DRAWWORKS SPECIALIST TO ARRIVE AND INSPECT AND DETERMINE IF THE LEBUS GROOVE SLEEVES CAN BE REPAIRED. IT WAS DETERMINED HE COULDN'T REPAIR THEM. SUPERINTENDANT FOUND WELDER TO ATTEMPT TO REPAIR THEM TOMORROW IN AM. WAITING ON OIL WORKS INT. | | | | | | | | | | | |

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| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 2/8/2020 | Spud | 1/23/2020 |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 2/9/2020 | TD'd | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 MUD FUEL: DELIVERED 0 GAL (13,801 TOTAL) MUD FUEL: USED 0 GAL (3,000 TOTAL) MUD FUEL REMAINING: 9,000 GAL RIG DOWN TIME 14 HRS (36.5 HRS TOTAL) | | | | | | | | |
| | | | | | Crews | | | |
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| | | | | | Delivered | | 43,098 | |
| | | | | | On Hand | 8,893 | | |
| | | | | | Used | | 34,205 | |
| | | | | | Ton Miles | | | |
| Line on Spool: Ft. / Size | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,223.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 4,919.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 27,560.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 17,820.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 2,169.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 27,560.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | JOHNSON SPECIALTY TOOLS | 4 | 1" DIESEL TRANSFER PUMP | 35.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | 942.00 | | | | |

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| Andrews University 28-33 # 1H | | | | | DRILLING REPORT | | Date | 2/8/2020 | Spud | 1/23/2020 |
| : 00004 API # 4200348217 | | | | | Throne - Andrews | | Printed | 2/9/2020 | TD'd | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | IRON HORSE TOOLS | | 1 | DAILY RENTAL SINGLE CHOKE, FLARELINE AND DRIVE OVER. | | 230.00 | | | |
| Last Tests: | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | | Daily Cost | 59,909.00 | |
| | | | | | | | | Cum. Cost | 1,832,902.00 | |

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| Andrews University 28-33 # 1H | | | | | | | | | | DRILLING REPORT | | | | Date | 2/9/2020 | Spud | 1/23/2020 |
| : 00004 API # 4200348217 | | | | | | | | | | Throne - Andrews | | | | Printed | 2/10/2020 | TD'd | |
| Report # | 20 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | | AFE # | 2019D01 | | | |
| Depth | 9,870 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | Phone | | | | | AFE-DH | \$2,633,990 | | |
| TVD | 9,591 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | | Rig Supv | TONY MITCHELL | | | | AFE-Test | | | |
| Footage | 0 | Ft/Hr | | Lithology | 80% SHALE/ 20% LIMESTONE | | | | Phone | 325-450-1134 | | | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | Rig Supt | J. WEST | | | | AFE-Total | | | | |
| LAST 24 HRS: WAIT ON WELDER & OIL WORKS INT. TO ARRIVE TO LOC., UNABLE TO REPAIR. 00:00-06:00- WAIT ON NEW LEBUS GROOVES FROM HOUSTON, INSTALL AND WELD ON NEW LEBUS GROOVES | | | | | | | | Phone | 325-450-4025 | | | | Working Int | | | | |
| NEXT 24 HRS:REPAIR DRAWWORKS LEBUS GROOVE SLEEVES, TIH, DRILL 8 1/2" LATERAL | | | | | | | | | | | | | | | | | |
| Mud | | Mud Company: STELLAR | | | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | | |
| OBM | 8.6 | | 64 | 10 | 8 | 5 | 9 | 1/32 | 14 | 4.45 | 75.50 | 18.50 | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | | |
| | | | | 38,000 | | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | | |
| | | | | | | | | 13.375 01/26/20 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | | |
| | | | | | | | | 9.625 02/03/20 | | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 | | |
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| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | | |
| 7 | 3,184.95 | | 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NMPC, UBHO, 2 X MONELS, 33 STDS 5" DP, AGITATOR. LENGTH- 3184.95' | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | | |
| 7 | 9,870 | | 8.750 | ULTERRA | SPL 616 | 50918 | | 9 .994 | | | 0 0 | | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | Location | Bearings/Seals | Gauge | Other Dull Characteristics | Reason Pulled | | | | | | | |
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| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | | Surveys (Max of 7) KOP: EOC: | | | | | | | | | | |
| | | | | | | | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | | | | |
| Pumps | | | | | | | | | | | | | | | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | | | | | | | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | | | | | | | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | | | | | | | | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | | | | | | | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | | | | | | | | | | | |
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| 24.00 Total Hours Daily Operations Report Time: 12:00 am - 12:00 am | | | | | | | | | | | | | | | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | | |
| 2:00 pm | 14.00 | 8 | 9,870 | WAIT FOR OIL WORKS INT. & WELDERS TO ATTEMPT TO REPAIR DAMAGED LEBUS GROOVES. THEY WERE UNABLE TO REPAIR THEM. SENDERO FOUND A SET IN HOUSTON & PREPARED THE DRUM FOR NEW INSTALL. | | | | | | | | | | | | | |
| 12:00 am | 10.00 | 8 | 9,870 | WAIT FOR USED SET OF LEBUS GROOVES TO ARRIVE ON HOT SHOT FROM HOUSTON. | | | | | | | | | | | | | |

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| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 2/9/2020 Spud | | 1/23/2020 |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 2/10/2020 TD'd | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 MUD FUEL: DELIVERED 0 GAL (13,801 TOTAL) MUD FUEL: USED 0 GAL (3,000 TOTAL) MUD FUEL REMAINING: 9,000 GAL RIG DOWN TIME 24 HRS (60.5 HRS TOTAL) | | | | | | | | |
| | | | | | Crews | | | |
| | | | | | Morning | Day | Evening | Relief |
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| | | | | | Diesel | | | |
| | | | | | Today | | Total | |
| | | | | | Delivered | | 43,098 | |
| | | | | | On Hand | 7,742 | | |
| | | | | | Used | | 35,356 | |
| | | | | | Ton Miles | | | |
| Line on Spool: Ft. / Size | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,223.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 3,706.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 8,800.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 0.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 956.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 0.00 | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | JOHNSON SPECIALTY TOOLS | 4 | 1" DIESEL TRANSFER PUMP | 35.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | 942.00 | | | | |

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| Andrews University 28-33 # 1H | | | | | DRILLING REPORT | | | Date | 2/9/2020 | Spud | 1/23/2020 |
| : 00004 API # 4200348217 | | | | | Throne - Andrews | | | Printed | 2/10/2020 | TD'd | |
| 2250.95 DRILLING EQUIPMENT RENTAL | | IRON HORSE TOOLS | | 1 | DAILY RENTAL SINGLE CHOKE, FLARELINE AND DRIVE OVER. | | | 230.00 | | | |
| Last Tests: | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | | | Daily Cost | 22,116.00 | |
| | | | | | | | | | Cum. Cost | 1,855,018.00 | |

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| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | | | Date | 2/10/2020 Spud | | 1/23/2020 | | | | |
|--|----------------|------------------|--|---|--------------------------|-------------|---------------|-----------------------------|----------|----------------|----------------------------|---------|----------------|----------------------------------|-----------|--------|-----|--|--|
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | | | Printed | 2/11/2020 | | TD'd | | | | |
| Report # | 21 | Prop TD | 20,304 | County | Andrews | | | State | TX | Rig | Sendero 15 | | AFE # | 2019D01 | | | | | |
| Depth | 10,050 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | | Phone | | | AFE-DH | \$2,633,990 | | | | | |
| TVD | 9,589 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | | | Rig Supv | TONY MITCHELL | | AFE-Test | | | | | | |
| Footage | 180 | Ft/Hr | | | 80% SHALE, 20% LIMESTONE | | | | | Phone | 325-450-1134 | | AFE-Comp | | | | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | | AFE-Total | | | | | | |
| LAST 24 HRS: WAIT ON PARTS, WELD ON LEBUS GROOVE SLEEVES, TIH, DRILL 8.5" LATERAL F/ 9,870' T/ 10,050". 00:00 - 06:00 DRILL LATERAL F/ 10,050' T/10,660' (610' @ 102 FPH) | | | | | | | | | | Rig Supt | J. WEST | | Working Int | | | | | | |
| | | | | | | | | | | Phone | 325-450-4025 | | Net Int | | | | | | |
| NEXT 24 HRS: DRILL 8 1/2" LATERAL | | | | | | | | | | | | | | | | | | | |
| Mud | | | | Mud Company: STELLAR | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | | | | |
| OBM | 8.6 | 8.93 | 64 | 10 | 8 | 5 | 9 | 1/32 | 14 | 4.45 | 75.50 | 15.50 | 0 | | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | | | | |
| | | | | 38,000 | | | | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) | | | | | | | | Kelly Down: | | | | | | | | Casing | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | | | | |
| | | | | | | | | 13.375 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | | | | |
| | | | | | | | | 01/26/20 | | | | | | | | | | | |
| | | | | | | | | 9.625 | | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 | | | | |
| | | | | | | | | 02/03/20 | | | | | | | | | | | |
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| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | | | | |
| 7 | 3,184.95 | | 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NMPC, UBHO, 2 X MONELS, 33 STDS 5" DP, AGITATOR. LENGTH- 3184.95' | | | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | | | | |
| 7 | 9,870 | | 8.750 | ULTERRA | SPL 616 | 50918 | | 9 | | | 0 | | | | | | | | |
| | | | | | | | | .994 | | | 0 | | | | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | | Gauge | Other Dull Characteristics | | Reason Pulled | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | | Torque | | Surveys (Max of 7) | | KOP: | 8,950 | EOC: | | 9,852 | | | | | |
| | 193 | 200 | 175 | | | 17500 | | Survey Type | | Measured Depth | Inclination | Azimuth | | DLS | | | | | |
| Pumps | | | | | | | | | | MWD | 9,852 | | 89.140 | 172.390 | 14.132 | | | | |
| Make/Model | | | | | | | | | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | | |
| RSF-FB 1600 | | | | | | | | | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | | |
| RSF-FB 1600 | | | | | | | | | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | | |
| PZ-10 | | | | | | | | | | | 10 | 6.50 | | 95% | 0.1 | | | | |
| Gas | Background Gas | | Connection Gas | | Trip Gas | | Max Gas | | Max At @ | | | | | | | | | | |
| | 91 | | 182 | | | | 242 | | 10218 | | | | | | | | | | |
| 24.00 Total Hours | | | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | | | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | | | | |
| 3:30 pm | 15.50 | 8 | 9,870 | WELD UP LEBUS GROOVE DISCS ON DRUM | | | | | | | | | | | | | | | |
| 6:00 pm | 2.50 | 9 | 9,870 | FINISH SLIPPING AND CUTTING DRILL LINESPOOL UP DRUM, UNHANG BLOCK AND TEST BRAKES | | | | | | | | | | | | | | | |
| 8:00 pm | 2.00 | 6 | 9,870 | TIH F/ 8,788' T/ 9,870', WASH DOWN LAST 50' | | | | | | | | | | | | | | | |
| 10:00 pm | 2.00 | 2 | 10,025 | ROTATE DRILL F/ 9,870' T/ 10,025' (155' @ 155 FPH) 650 GPM, 500 DIFF, 4,500 PSI, 30 WOB, 65 RPM, 17.5K TQ | | | | | | | | | | | | | | | |
| 10:30 pm | 0.50 | 2 | 10,033 | SLIDE DRILL F/ 10,025' T/ 10,033' (8' @ 16 FPH) 550 GPM, 15 WOB, 225 DIFF, TF 110 | | | | | | | | | | | | | | | |
| 11:30 pm | 1.00 | 8 | 10,033 | CHANGE OUT WASHED OUT 2" NIPPLE AND TEE ON STAND PIPE | | | | | | | | | | | | | | | |
| 12:00 am | 0.50 | 2 | 10,050 | SLIDE DRILL F/ 10,033' T/ 10,050' (17' @ 34 FPH) 650 GPM, 15 WOB, 225 DIFF, TF 120 | | | | | | | | | | | | | | | |

| Additional Comments | Mud / Chemical Used Today | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---------|--------|--|--|---------|-----|---------|--------|--|--|--|--|--|--|--|--|--------|-------|-------|-----------|---|--------|---------|-------|--|------|-------|--------|-----------|--|--|---------------------------|--|--|----------------------------|--|--|-------------------------|--|--|
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 MUD FUEL: DELIVERED 0 GAL (13,801 TOTAL) MUD FUEL: USED 750 GAL (3,000 TOTAL) MUD FUEL REMAINING: 8,250 GAL RIG DOWN TIME 16.5 HRS (77 HRS TOTAL) | <table><tr><th colspan="4">Crews</th></tr><tr><th>Morning</th><th>Day</th><th>Evening</th><th>Relief</th></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table> <table><tr><th>Diesel</th><th>Today</th><th>Total</th></tr><tr><td>Delivered</td><td>0</td><td>43,098</td></tr><tr><td>On Hand</td><td>5,883</td><td></td></tr><tr><td>Used</td><td>1,859</td><td>37,215</td></tr></table> <table><tr><th colspan="3">Ton Miles</th></tr><tr><td>Line on Spool: Ft. / Size</td><td></td><td></td></tr><tr><td>Ton Miles: Current / Total</td><td></td><td></td></tr><tr><td>Line Cut: Today / Total</td><td></td><td></td></tr></table> | Crews | | | | Morning | Day | Evening | Relief | | | | | | | | | Diesel | Today | Total | Delivered | 0 | 43,098 | On Hand | 5,883 | | Used | 1,859 | 37,215 | Ton Miles | | | Line on Spool: Ft. / Size | | | Ton Miles: Current / Total | | | Line Cut: Today / Total | | |
| Crews | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Morning | Day | Evening | Relief | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Diesel | Today | Total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Delivered | 0 | 43,098 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| On Hand | 5,883 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Used | 1,859 | 37,215 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Line on Spool: Ft. / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Expenses | | | | | Expenses by Category | |
|-----------------------------------|--------------------------|---|---|-----------|-----------------------------------|-----------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,223.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 33,228.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 8,800.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 6,312.00 |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.65 SUPERVISION | 3,200.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 2 | RIG UP & TRANSPORTATION | 12,562.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | TWILIGHT SERVICES | 1 | TRACK HOE TO MOVE CUTTINGS IN RESERVE | 6,000.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 956.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | R & D TRUCKING | 1 | VAC TRUCK TO CLEAN PITS | 1,820.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | R & D TRUCKING | 2 | DELIVERY OF OBM | 9,140.00 | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 6,312.00 | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | |

| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | Date | 2/11/2020 Spud | | 1/23/2020 | | |
|--|----------------|--|----------------------|--|--------------------------|--------------------|----------------|------------------|-----------------------------|---------------|----------------|-----------|----------------------------------|--------|----------|
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | Printed | 2/12/2020 | | TD'd | | |
| Report # | 22 | Prop TD | 20,304 | County | Andrews | | State | TX | Rig | Sendero 15 | | AFE # | 2019D01 | | |
| Depth | 12,112 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | Phone | | | AFE-DH | \$2,633,990 | | |
| TVD | 9,594 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | | Rig Supv | TONY MITCHELL | | AFE-Test | | | |
| Footage | 2,062 | Ft/Hr | | Lithology | 90% SHALE, 10% LIMESTONE | | | | Phone | 325-450-1134 | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | AFE-Total | | | |
| LAST 24 HRS: DRILL 8.5" LATERAL F/ 10,050' T/ 12,112' (2,062' @ 88 FPH). 00:00 - 06:00: DRILL 8.5" LATERAL F/ 12,112' T/ 12,641' (529' @ 88 FPH). | | | | | | | | Rig Supt | J. WEST | | Working Int | | | | |
| | | | | | | | | Phone | 325-450-4025 | | Net Int | | | | |
| NEXT 24 HRS: DRILL 8 1/2" LATERAL | | | | | | | | | | | | | | | |
| Mud | | | Mud Company: STELLAR | | | | | | Mud Engineer: JEFF BRANTLEY | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | |
| OBM | 8.55 | 8.91 | 56 | 12 | 9 | 5 | 9 | 1/32 | 12 | 4.16 | 77.00 | 23.00 | 0 | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | |
| | | | | 45,000 | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest |
| | | | | | | | | 13.375 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 |
| | | | | | | | | 01/26/20 | | | | | | | |
| | | | | | | | | 9.625 | | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 |
| | | | | | | | | 02/03/20 | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | |
| 7 | 3,184.95 | 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NMPC, UBHO, 2 X MONELS, 33 STDS 5" DP, AGITATOR. LENGTH- 3184.95' | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | |
| 7 | 9,870 | | 8.750 | ULTERRA | SPL 616 | 50918 | | 9 | | | 0 | | | | |
| | | | | | | | | .994 | | | 0 | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | Location | Bearings/Seals | Gauge | Other Dull Characteristics | Reason Pulled | | | | | |
| | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | Surveys (Max of 7) | | | KOP: 8,950 | EOC: 9,852 | | | | | |
| | 195 | 200 | 185 | | 18500 | Survey Type | | Measured Depth | Inclination | Azimuth | DLS | | | | |
| Pumps | | | | | | | | MWD | | 11,327 | 90.590 | 166.240 | 2.355 | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | 11,419 | 91.520 | 166.850 | 1.209 | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | MWD | 11,512 | 90.810 | 167.200 | 0.851 | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 60.0 | 95% | 0.1 | 5.7 | | MWD | 11,604 | 88.350 | 166.590 | 2.755 | |
| PZ-10 | | | 10 | 6.50 | | 95% | 0.1 | | | MWD | 11,696 | 88.260 | 167.380 | 0.864 | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | MWD | | | | 11,788 | 88.260 | 167.470 | 0.098 | | |
| | 108 | 236 | | 216 | 11827 | MWD | | | | 11,880 | 89.850 | 168.260 | 1.930 | | |
| 24.00 | | Total Hours | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | |
| 12:30 am | 0.50 | 2 | 10,107 | ROTATE DRILL F/ 10,050' T/ 10,107' (57' @ 114 FPH) 650 GPM, 500-600 DIFF, 4,500 PSI, 30 WOB, 65 RPM, 17.5K TQ | | | | | | | | | | | |
| 1:00 am | 0.50 | 2 | 10,126 | SLIDE DRILL F/ 10,107' T/ 10,126' (19' @ 34 FPH) 650 GPM, 15 WOB, 125 DIFF, TF 125 | | | | | | | | | | | |
| 1:30 am | 0.50 | 2 | 10,199 | ROTATE DRILL F/ 10,126' T/ 10,199' (73' @ 146 FPH) 650 GPM, 500-600 DIFF, 4,500 PSI, 30 WOB, 65 RPM, 17.5K TQ | | | | | | | | | | | |
| 2:00 am | 0.50 | 2 | 10,215 | SLIDE DRILL F/ 10,199' T/ 10,215' (16' @ 32 FPH) 650 GPM, 18 WOB, 175 DIFF, TF 120 | | | | | | | | | | | |
| 3:00 am | 1.00 | 2 | 10,383 | ROTATE DRILL F/ 10,215' T/ 10,383' (168' @ 168 FPH) 650 GPM, 500-600 DIFF, 4,300 PSI, 30 WOB, 65 RPM, 18.5K TQ | | | | | | | | | | | |
| 3:30 am | 0.50 | 2 | 10,403 | SLIDE DRILL F/ 10,383' T/ 10,403' (20' @ 40 FPH) 650 GPM, 18 WOB, 175 DIFF, TF 90L | | | | | | | | | | | |
| 5:00 am | 1.50 | 2 | 10,569 | ROTATE DRILL F/ 10,403' T/ 10,569' (166' @ 111 FPH) 650 GPM, 500-600 DIFF, 4,300 PSI, 30 WOB, 65 RPM, 18.5K TQ | | | | | | | | | | | |
| 5:30 am | 0.50 | 2 | 10,589 | SLIDE DRILL F/ 10,569' T/ 10,589' (20' @ 40 FPH) 650 GPM, 18 WOB, 175 DIFF, TF 70L | | | | | | | | | | | |
| 7:00 am | 1.50 | 2 | 10,764 | ROTATE DRILL F/ 10,589' T/ 10,764' (175' @ 117 FPH) 650 GPM, 500-600 DIFF, 4,450 PSI, 30 WOB, 65 RPM, 18.5K TQ | | | | | | | | | | | |
| 7:30 am | 0.50 | 2 | 10,790 | SLIDE DRILL F/ 10,764' T/ 10,790' (26' @ 52 FPH) 650 GPM, 18 WOB, 175 DIFF, TF 60L | | | | | | | | | | | |
| 8:30 am | 1.00 | 2 | 10,916 | ROTATE DRILL F/ 10,790' T/ 10,916' (126' @ 126 FPH) 650 GPM, 500-600 DIFF, 4,500 PSI, 30 WOB, 65 RPM, 18.5K TQ | | | | | | | | | | | |
| 9:30 am | 1.00 | 2 | 10,936 | SLIDE DRILL F/ 10,916' T/ 10,936' (20' @ 20 FPH) 650 GPM, 18 WOB, 175 DIFF, TF 20L | | | | | | | | | | | |
| 10:00 am | 0.50 | 2 | 10,946 | ROTATE DRILL F/ 10,936' T/ 10,946' (10' @ 20 FPH) 650 GPM, 500-600 DIFF, 4,500 PSI, 30 WOB, 65 RPM, 20.5K TQ | | | | | | | | | | | |
| 11:00 am | 1.00 | 2 | 10,976 | SLIDE DRILL F/ 10,946' T/ 10,976' (30' @ 30 FPH) 650 GPM, 18 WOB, 175 DIFF, TF 20L | | | | | | | | | | | |
| 12:30 pm | 1.50 | 2 | 11,131 | ROTATE DRILL F/ 10,976' T/ 11,131' (155' @ 103 FPH) 650 GPM, 500-600 DIFF, 4,500 PSI, 30 WOB, 65 RPM, 20.5K TQ | | | | | | | | | | | |
| 1:00 pm | 0.50 | 2 | 11,151 | SLIDE DRILL F/ 11,131' T/ 11,151' (20' @ 40 FPH) 650 GPM, 18 WOB, 175 DIFF, TF 150L | | | | | | | | | | | |
| 2:00 pm | 1.00 | 2 | 11,306 | ROTATE DRILL F/ 11,151' T/ 11,306' (155' @ 155 FPH) 650 GPM, 500-600 DIFF, 4,500 PSI, 30 WOB, 65 RPM, 20.5K TQ | | | | | | | | | | | |
| 3:00 pm | 1.00 | 2 | 11,326 | SLIDE DRILL F/ 11,306' T/ 11,326' (20' @ 20 FPH) 650 GPM, 18 WOB, 175 DIFF, TF 180L | | | | | | | | | | | |
| 4:30 pm | 1.50 | 2 | 11,489 | ROTATE DRILL F/ 11,326' T/ 11,489' (163' @ 109 FPH) 650 GPM, 500-600 DIFF, 4,500 PSI, 30 WOB, 65 RPM, 20.5K TQ | | | | | | | | | | | |

| Andrews University 28-33 # 1H | | | | | DRILLING REPORT | | Date | 2/11/2020 | Spud | 1/23/2020 |
|---|------|--------------------------|--------|---|---------------------------|-----------------------------------|----------------------|-----------|------|-----------|
| : 00004 | | API # 4200348217 | | | Throne - Andrews | | Printed | 2/12/2020 | TD'd | |
| 5:00 pm | 0.50 | 7 | 11,489 | LUBRICATE RIG | | | | | | |
| 5:30 pm | 0.50 | 2 | 11,510 | SLIDE DRILL F/ 11,489' T/ 11,510' (21' @ 42 FPH) 650 GPM, 18 WOB, 175 DIFF, TF 170L | | | | | | |
| 6:00 pm | 0.50 | 2 | 11,582 | ROTATE DRILL F/ 11,510' T/ 11,582' (72' @ 144 FPH) 600 GPM, 700 DIFF, 4,150 PSI, 30 WOB, 70 RPM, 20.5K TQ | | | | | | |
| 7:00 pm | 1.00 | 2 | 11,607 | SLIDE DRILL F/ 11,582' T/ 11,607' (25' @ 25 FPH) 610 GPM, 35 WOB, 175 DIFF, TF 170R | | | | | | |
| 12:00 am | 5.00 | 2 | 12,112 | ROTATE DRILL F/ 11,607' T/ 12,112' (505' @ 101 FPH) 600 GPM, 400-700 DIFF, 4150 PSI, 30 WOB, 70 RPM, 18K TQ | | | | | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 MUD FUEL: DELIVERED 2715 GAL (16,516 TOTAL) MUD FUEL: USED 3965 GAL (7,715 TOTAL) MUD FUEL REMAINING: 7,000 GAL RIG DOWN TIME 0 HRS (77 HRS TOTAL) | | | | | | | | | | |
| | | | | | Crews | | | | | |
| | | | | | Morning | Day | Evening | Relief | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | Diesel | Today | Total | | | |
| | | | | | Delivered | 4,400 | 47,498 | | | |
| | | | | | On Hand | 7,406 | | | | |
| | | | | | Used | 2,877 | 40,092 | | | |
| | | | | | Ton Miles | | | | | |
| Line on Spool: Ft. / Size | | | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | | | |
| Expenses | | | | | | | Expenses by Category | | | |
| Category | | Company / Vendor | # | Description | Cost | Category | Cost | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,223.00 | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.20 CEMENT & CEMENT SERVICES | 3,712.00 | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.25 DRILLING MUD & CHEMICALS | 11,479.00 | | | |
| 2250.105 SURFACE RENTALS | | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.45 DIRECTIONAL | 8,800.00 | | | |
| 2250.105 SURFACE RENTALS | | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.50 DRILLING DAYWORK | 17,820.00 | | | |
| 2250.105 SURFACE RENTALS | | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.55 RIG FUEL | 9,199.00 | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.65 SUPERVISION | 3,200.00 | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | | | | |
| 2250.105 SURFACE RENTALS | | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | | | | | |
| 2250.20 CEMENT & CEMENT SERVICES | | CHIEF OILFIELD SERVICES | 1 | SHAKER SCREENS | 3,712.00 | | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 3,053.00 | | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | | PILOT THOMAS | 2 | 2715 GAL MUD FUEL | 5,676.00 | | | | | |
| 2250.45 DIRECTIONAL SERVICES | | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | | | | |
| 2250.50 DRILLING DAYWORK | | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | | | | |
| 2250.55 RIG FUEL | | PILOT THOMAS | 1 | 4400 GAL RIG FUEL | 9,199.00 | | | | | |
| 2250.60 MUD LOGGING & GEO | | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | | |
| 2250.60 MUD LOGGING & GEO | | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | | | | |
| 2250.65 SUPERVISION | | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | | |

| | | | | | | | | | |
|-----------------------------------|-------------------------|------------------|---|------------------|------------|-----------|-------------------------|------------|--------------|
| Andrews University 28-33 # 1H | | | | DRILLING REPORT | | Date | 2/11/2020 | Spud | 1/23/2020 |
| : 00004 | | API # 4200348217 | | Throne - Andrews | | Printed | 2/12/2020 | TD'd | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | | | 1,600.00 | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | | | 200.00 | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | | | 150.00 | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | | | 150.00 | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | | | 150.00 | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | JOHNSON SPECIALTY TOOLS | 4 | 1" DIESEL TRANSFER PUMP | | | 35.00 | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | PASON | 1 | EDR | | | 942.00 | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | IRON HORSE TOOLS | 1 | DAILY RENTAL SINGLE CHOKE, FLARELINE AND DRIVE OVER. | | | 230.00 | | | |
| Last Tests: | | Pit Drill | BOP Test | BOP Drill | Tour (BOP) | PVT Check | AccidentsReportedToday? | Daily Cost | 60,620.00 |
| | | | | | | | | Cum. Cost | 1,973,588.00 |
| | | | | | | | | | |

| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | Date | 2/12/2020 Spud | | 1/23/2020 | | | |
|---|----------------|--|---------------|--|--------------------------|-------------|---------------|-----------------------------|--------------|----------------|----------------------------|----------------------------------|---------------|---------|----------|-------|
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | Printed | 2/13/2020 | | TD'd | | | |
| Report # | 23 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | AFE # | 2019D01 | | | |
| Depth | 14,050 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | AFE-DH | \$2,633,990 | | | |
| TVD | 9,626 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | Rig Supv | IRVIN GARCIA | | | AFE-Test | | | | |
| Footage | 1,938 | Ft/Hr | | Lithology | 85% SHALE, 15% LIMESTONE | | | Phone | 325-450-1134 | | | AFE-Comp | | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | AFE-Total | | | | |
| LAST 24 HRS: DRILL 8.5" LATERAL F/ 12,112' T/ 14,050' (1938' @ 82 FPH). 00:00 - 06:00: DRILL 8.5" LATERAL F/ 14,050' T/ 14,529' (479' @ 80 FPH) | | | | | | | | Rig Supt | J. WEST | | | Working Int | | | | |
| | | | | | | | | Phone | 325-450-4025 | | | Net Int | | | | |
| NEXT 24 HRS: DRILL 8 1/2" LATERAL | | | | | | | | | | | | | | | | |
| Mud | | | | Mud Company: STELLAR | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | |
| OBM | 8.55 | 8.97 | 55 | 11 | 14 | 5 | 9 | 2/32 | 11 | 4.71 | 75.50 | 6.50 | 46 | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | |
| | | | | 43,000 | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | |
| | | | | | | | | 13.375 01/26/20 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | |
| | | | | | | | | 9.625 02/03/20 | | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | |
| 7 | 3,184.95 | 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NMPC, UBHO, 2 X MONELS, 33 STDS 5" DP, AGITATOR. LENGTH- 3184.95' | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | |
| 7 | 9,870 | | 8.500 | ULTERRA | SPL 616 | 50918 | | | | | 0 | | | | | |
| | | | | | | | | | | | 0 | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | | Gauge | Other Dull Characteristics | | Reason Pulled | | | |
| | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | | Torque | | Surveys (Max of 7) | | KOP: | 8,950 | EOC: | | 9,852 | | |
| | 193 | 210 | 182 | | | 21000 | | Survey Type | | Measured Depth | Inclination | Azimuth | | DLS | | |
| Pumps | | | | | | | | MWD | | | 13,353 | 85.050 | 166.770 | 2.766 | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | | | 13,446 | 87.780 | 165.710 | 3.148 |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.6 | 500 | MWD | | | 13,538 | 89.230 | 165.710 | 1.576 |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.7 | 490 | MWD | | | 13,629 | 90.770 | 166.060 | 1.735 |
| PZ-10 | | | 10 | 6.50 | 0.0 | 95% | 0.1 | | | MWD | | | 13,721 | 91.380 | 166.240 | 0.691 |
| Gas | Background Gas | Connection Gas | Trip Gas | | Max Gas | | Max At @ | | MWD | | | 13,813 | 90.510 | 167.640 | 1.791 | |
| | 131 | 277 | | | 252 | | 13245 | | MWD | | | 13,905 | 90.460 | 169.230 | 1.729 | |
| 24.00 | | Total Hours | | Daily Operations | | | | | | | | Report Time: 12:00 am - 12:00 am | | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | |
| 2:00 am | 2.00 | 2 | 12,318 | ROTATE DRILL F/ 12,112' T/ 12,318' (206' @ 103 FPH) 600 GPM, 400 DIFF, 4175 PSI, 30 WOB, 70 RPM, 19K TQ | | | | | | | | | | | | |
| 3:00 am | 1.00 | 2 | 12,339 | SLIDE DRILL F/ 12,318' T/ 12,339' (21' @ 21 FPH) 600 GPM, 35 WOB, 125 DIFF, TF 160L | | | | | | | | | | | | |
| 7:30 am | 4.50 | 2 | 12,816 | ROTATE DRILL F/ 12,339' T/ 12,816' (477' @ 106 FPH) 600 GPM, 400 DIFF, 4175 PSI, 30 WOB, 70 RPM, 19K TQ | | | | | | | | | | | | |
| 8:00 am | 0.50 | 2 | 12,836 | SLIDE DRILL F/ 12,816' T/ 12,836' (20' @ 40 FPH) 600 GPM, 35 WOB, 125 DIFF, TF 180 | | | | | | | | | | | | |
| 2:00 pm | 6.00 | 2 | 13,424 | ROTATE DRILL F/ 12,836' T/ 13,424' (588' @ 98 FPH) 600 GPM, 400 DIFF, 4175 PSI, 30 WOB, 70 RPM, 19K TQ | | | | | | | | | | | | |
| 3:00 pm | 1.00 | 2 | 13,460 | SLIDE DRILL F/ 13,424' T/ 13,460' (36' @ 36 FPH) 600 GPM, 35 WOB, 125 DIFF, TF 180 | | | | | | | | | | | | |
| 3:30 pm | 0.50 | 2 | 13,516 | ROTATE DRILL F/ 13,460' T/ 13,516' (56' @ 112 FPH) 600 GPM, 400 DIFF, 4175 PSI, 30 WOB, 70 RPM, 19K TQ | | | | | | | | | | | | |
| 4:00 pm | 0.50 | 7 | 13,516 | LUBRICATE RIG | | | | | | | | | | | | |
| 5:00 pm | 1.00 | 2 | 13,608 | ROTATE DRILL F/ 13,516' T/ 13,608' (92' @ 92 FPH) 600 GPM, 400 DIFF, 4175 PSI, 30 WOB, 70 RPM, 19K TQ | | | | | | | | | | | | |
| 5:30 pm | 0.50 | 2 | 13,624 | SLIDE DRILL F/ 13,608' T/ 13,624' (16' @ 32 FPH) 600 GPM, 35 WOB, 125 DIFF, TF HS | | | | | | | | | | | | |
| 7:30 pm | 2.00 | 2 | 13,800 | ROTATE DRILL F/ 13,624' T/ 13,800' (176' @ 88 FPH) 600 GPM, 400 DIFF, 4175 PSI, 30 WOB, 70 RPM, 19K TQ | | | | | | | | | | | | |
| 8:00 pm | 0.50 | 2 | 13,822 | SLIDE DRILL F/ 13,800' T/ 13,822' (22' @ 36 FPH) 600 GPM, 35 WOB, 125 DIFF, TF 180 | | | | | | | | | | | | |
| 9:00 pm | 1.00 | 2 | 13,883 | ROTATE DRILL F/ 13,822' T/ 13,883' (61' @ 61 FPH) 600 GPM, 400 DIFF, 4200 PSI, 30 WOB, 70 RPM, 19-21K TQ | | | | | | | | | | | | |
| 9:30 pm | 0.50 | 2 | 13,903 | SLIDE DRILL F/ 13,883' T/ 13,903' (20' @ 40 FPH) 600 GPM, 40 WOB, 150 DIFF, TF 160R | | | | | | | | | | | | |
| 10:30 pm | 1.00 | 2 | 13,976 | ROTATE DRILL F/ 13,903' T/ 13,976' (73' @ 73 FPH) 600 GPM, 400 DIFF, 4200 PSI, 30 WOB, 70 RPM, 19-21K TQ | | | | | | | | | | | | |
| 11:30 pm | 1.00 | 2 | 14,005 | SLIDE DRILL F/ 13,976' T/ 14,005' (29' @ 29 FPH) 600 GPM, 40 WOB, 150 DIFF, TF 180 | | | | | | | | | | | | |
| 12:00 am | 0.50 | 2 | 14,050 | ROTATE DRILL F/ 14,005' T/ 14,050' (45' @ 95 FPH) 600 GPM, 3-400 DIFF, 4200 PSI, 30 WOB, 80 RPM, 19-22K TQ | | | | | | | | | | | | |

| | | | | | | | | |
|--|--------------------------|---|---|-----------|-----------------------------------|----------------|---------|-----------|
| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 2/12/2020 Spud | | 1/23/2020 |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 2/13/2020 TD'd | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 PLAN#6:9,629' TVD @0 VS 90 INC 167.5 AZIM MUD FUEL: DELIVERED 0 GAL (16,516 TOTAL) MUD FUEL: USED 4,000 GAL (7,715 TOTAL) MUD FUEL REMAINING: 3,000 GAL RIG DOWN TIME 0 HRS (77 HRS TOTAL) | | | | | | | | |
| | | | | | Crews | | | |
| | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | Diesel | | | |
| | | | | | Delivered | 0 | 47,498 | |
| | | | | | On Hand | 4,378 | | |
| | | | | | Used | 3,028 | 43,120 | |
| | | | | | Ton Miles | | | |
| Line on Spool: Ft. / Size | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 14,596.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 12,751.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.32 TUBULAR/WELLHEAD | 1,690.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.45 DIRECTIONAL | 8,800.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.50 DRILLING DAYWORK | 17,820.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 | | |
| 2250.105 SURFACE RENTALS | FULL DRAW SPECIALTIES | 1 | CLEAN CO MAN HOUSE | 250.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR DRILLING FLUIDS | 1 | CATCH UP CHARGES FOR RIG UP & MISC PERMIT CHARGES | 10,263.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR DRILLING FLUIDS | 2 | HAUL OFF & CLEAN OUT OF TRASH T LIER/PORTAJOHNS | 1,860.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 10,001.00 | | | | |
| 2250.32 TUBULAR/WELLHEAD | QUALITY | 1 | INSPECT BHA | 1,690.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | |

| Andrews University 28-33 # 1H | | | | | | | | DRILLING REPORT | | Date | | 2/13/2020 Spud | | 1/23/2020 | | |
|--|----------------|--|------------------|---|-------------------------|--------------------|----------------|-----------------------------|----------------------------|---------------|------------|----------------|------------|-------------|----------|----------------------------------|
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | Printed | | 2/14/2020 | | TD'd | | |
| Report # | 24 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | AFE # | | 2019D01 | | |
| Depth | 15,833 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | AFE-DH | | \$2,633,990 | | |
| TVD | 9,631 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | Rig Supv | IRVIN GARCIA | | | AFE-Test | | | | |
| Footage | 1,783 | Ft/Hr | | Lithology | 95% SHALE, 5% LIMESTONE | | | Phone | 325-450-1134 | | | AFE-Comp | | | | |
| Present Operations / Executive Summary | | | | | | | | Phone | 325-450-1134 | | | AFE-Total | | | | |
| LAST 24 HRS: DRILL 8.5" LATERAL F/ 14,050' T/ 15,833' (1783' @ 76 FPH). 00:00 - 06:00: DRILL 8.5" LATERAL F/ 15,833' T/ 16,187' (354' @ 59 FPH) | | | | | | | | Rig Supt | J. WEST | | | Working Int | | | | |
| | | | | | | | | Phone | 325-450-4025 | | | Net Int | | | | |
| NEXT 24 HRS: DRILL 8 1/2" LATERAL | | | | | | | | | | | | | | | | |
| Mud | | | | Mud Company: STELLAR | | | | Mud Engineer: JEFF BRANTLEY | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | |
| OBM | 8.55 | 8.97 | 60 | 11 | 14 | 9 | 15 | 2/32 | 11 | 4.04 | 71.00 | 23.00 | 169 | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | |
| | | | | 48,000 | | | | 1,071 | 384 | 472 | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | |
| | | | | | | | | 13.375 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | |
| | | | | | | | | 01/26/20 | | | | | | | | |
| | | | | | | | | 9.625 | | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 | |
| | | | | | | | | 02/03/20 | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | |
| 7 | 3,184.95 | 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NMPC, UBHO, 2 X MONELS, 33 STDS 5" DP, AGITATOR. LENGTH- 3184.95' | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | |
| 7 | 9,870 | | 8.500 | ULTERRA | SPL 616 | 50918 | | | | | 0 | | | | | |
| | | | | | | | | | | | 0 | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | Location | Bearings/Seals | Gauge | Other Dull Characteristics | Reason Pulled | | | | | | |
| | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | Surveys (Max of 7) | | KOP: 8,950 | EOC: 9,852 | | | | | | | |
| | 188 | 205 | 170 | | 22.5 | Survey Type | | Measured Depth | Inclination | Azimuth | DLS | | | | | |
| Pumps | | | | | | | | MWD | | 15,196 | 87.740 | 165.270 | 0.978 | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | 15,287 | 88.090 | 166.330 | 1.226 | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.6 | 500 | MWD | 15,380 | 89.140 | 165.800 | 1.265 | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.7 | 490 | MWD | 15,471 | 89.670 | 165.890 | 0.591 | | |
| PZ-10 | | | 10 | 6.50 | 0.0 | 95% | 0.1 | | | MWD | 15,563 | 91.300 | 166.680 | 1.969 | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | MWD | | 15,655 | 91.690 | 166.850 | 0.462 | | | | | |
| | 113 | 196 | | 231 | 15180 | MWD | | 15,748 | 92.970 | 167.200 | 1.427 | | | | | |
| 24.00 | | Total Hours | Daily Operations | | | | | | | | | | | | | Report Time: 12:00 am - 12:00 am |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | |
| 3:00 am | 3.00 | 2 | 14,344 | ROTATE DRILL F/ 14,050' T/ 14,344' (294' @ 98 FPH) 600 GPM, 3-400 DIFF, 4200 PSI, 30 WOB, 80 RPM, 19-22K TQ | | | | | | | | | | | | |
| 4:00 am | 1.00 | 2 | 14,370 | SLIDE DRILL F/ 14,344' T/ 14,370' (26' @ 26 FPH) 610 GPM, 40 WOB, 175 DIFF, TF 20L | | | | | | | | | | | | |
| 5:00 am | 1.00 | 2 | 14,438 | ROTATE DRILL F/ 14,370' T/ 14,438' (68' @ 68 FPH) 610 GPM, 3-400 DIFF, 4250 PSI, 30 WOB, 70 RPM, 19-22K TQ | | | | | | | | | | | | |
| 5:30 am | 0.50 | 2 | 14,448 | SLIDE DRILL F/ 14,438' T/ 14,448' (10' @ 20 FPH) 610 GPM, 40 WOB, 175 DIFF, TF 20L | | | | | | | | | | | | |
| 10:00 am | 4.50 | 2 | 14,897 | ROTATE DRILL F/ 14,448' T/ 14,897' (449' @ 100 FPH) 610 GPM, 3-400 DIFF, 4250 PSI, 30 WOB, 70 RPM, 19-22K TQ | | | | | | | | | | | | |
| 11:30 am | 1.50 | 2 | 14,993 | SLIDE DRILL F/ 14,897' T/ 14,993' (96' @ 64 FPH) 610 GPM, 40 WOB, 175 DIFF, TF 180 | | | | | | | | | | | | |
| 3:00 pm | 3.50 | 2 | 15,266 | ROTATE DRILL F/ 14,993' T/ 15,266' (273' @ 78 FPH) 610 GPM, 3-400 DIFF, 4250 PSI, 30 WOB, 70 RPM, 19-22K TQ | | | | | | | | | | | | |
| 3:30 pm | 0.50 | 7 | 15,266 | LUBRICATE RIG | | | | | | | | | | | | |
| 4:30 pm | 1.00 | 2 | 15,287 | SLIDE DRILL F/ 15,266' T/ 15,287' (21' @ 21 FPH) 610 GPM, 40 WOB, 175 DIFF, TF 30R | | | | | | | | | | | | |
| 5:30 pm | 1.00 | 2 | 15,362 | ROTATE DRILL F/ 15,287' T/ 15,362' (75' @ 75 FPH) 610 GPM, 3-400 DIFF, 4400 PSI, 27 WOB, 70 RPM, 19-22K TQ | | | | | | | | | | | | |
| 6:00 pm | 0.50 | 2 | 15,372 | SLIDE DRILL F/ 15,362' T/ 15,372' (10' @ 20 FPH) 610 GPM, 40 WOB, 175 DIFF, TF HS | | | | | | | | | | | | |
| 10:00 pm | 4.00 | 2 | 15,818 | ROTATE DRILL F/ 15,372' T/ 15,818' (446 @ 111 FPH) 610 GPM, 3-400 DIFF, 4400 PSI, 27-30 WOB, 70 RPM, 19-22K TQ | | | | | | | | | | | | |
| 12:00 am | 2.00 | 2 | 15,833 | SLIDE DRILL F/ 15,818' T/ 15,833' (15' @ 8 FPH) 500 GPM, 40 WOB, 150 DIFF, TF 160. DRILLING WITH REDUCED PARAMETERS WHILE CHANGING LINERS IN #2 MUDPUMP | | | | | | | | | | | | |

| | | | | | | | | |
|--|--------------------------|---|---|-----------|-----------------------------------|----------------|---------|-----------|
| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 2/13/2020 Spud | | 1/23/2020 |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 2/14/2020 TD'd | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 PLAN #8: 9,633' TVD @0 VS 90 INC 167.5 AZIM PLAN #7: 9,636' TVD @0 VS 90 INC 167.5 AZIM PLAN #6: 9,629' TVD @0 VS 90 INC 167.5 AZIM MUD FUEL: DELIVERED 0 GAL (18,865 TOTAL) MUD FUEL: USED 2250 GAL (13,965 TOTAL) MUD FUEL REMAINING: 750 GAL RIG DOWN TIME 0 HRS (77 HRS TOTAL) | | | | | | | | |
| | | | | | Crews | | | |
| | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | |
| | | | | | Diesel | | | |
| | | | | | Today | Total | | |
| | | | | | Delivered | 5,000 | 52,498 | |
| | | | | | On Hand | 6,222 | | |
| | | | | | Used | 3,156 | 46,276 | |
| | | | | | Ton Miles | | | |
| Line on Spool: Ft. / Size | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,223.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 14,611.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 8,800.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 17,820.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.55 RIG FUEL | 10,459.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 7,622.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 6,947.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 2 | 2349 GAL @ \$1.8879/ GAL | 4,914.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | | | |
| 2250.55 RIG FUEL | PILOT THOMAS | 1 | 5000 GAL @ \$1.8879/ GAL | 10,459.00 | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 2 | DELIVER FRAC TANKS & SET UP | 5,765.00 | | | | |

| | | | | | | | | | | | | | | | | |
|--|----------------|--|---------------|---|--------------------------|--------------------|----------------|------------------|----------------------------|-----------------------------|------------|---------|----------------|----------------------------------|-----------|--|
| Andrews University 28-33 # 1H | | | | | | | | | | DRILLING REPORT | | Date | 2/14/2020 Spud | | 1/23/2020 | |
| : 00004 | | API # 4200348217 | | | | | | Throne - Andrews | | | | Printed | 2/15/2020 | | TD'd | |
| Report # | 25 | Prop TD | 20,304 | County | Andrews | | State | TX | Rig | Sendero 15 | | | AFE # | 2019D01 | | |
| Depth | 16,928 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | Phone | | | | AFE-DH | \$2,633,990 | | |
| TVD | 9,628 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | | Rig Supv | IRVIN GARCIA | | | AFE-Test | | | |
| Footage | 1,095 | Ft/Hr | | Lithology | 90% SHALE, 10% LIMESTONE | | | | Phone | 325-450-1134 | | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | | Phone | 325-450-1134 | | | AFE-Total | | | |
| LAST 24 HRS: DRILL 8.5" LATERAL F/ 15,833' T/ 16,928' (1095' @ 52 FPH) | | | | | | | | | Rig Supt | J. WEST | | | Working Int | | | |
| 00:00 - 06:00: DRILL 8.5" LATERAL F/ 16,928' T/ 17,387' (459' @ 77 FPH) | | | | | | | | | Phone | 325-450-4025 | | | Net Int | | | |
| NEXT 24 HRS: DRILL 8 1/2" LATERAL | | | | | | | | | | | | | | | | |
| Mud | | | | Mud Company: STELLAR | | | | | | Mud Engineer: JEFF BRANTLEY | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | |
| OBM | 8.6 | 8.92 | 59 | 11 | 10 | 9 | 14 | 2/32 | 11 | 4.25 | 72.00 | 23.00 | 127 | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | |
| | | | | 43,000 | | | | 1,149 | 404 | 693 | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | |
| | | | | | | | | 13.375 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | |
| | | | | | | | | 01/26/20 | | | | | | | | |
| | | | | | | | | 9.625 | | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 | |
| | | | | | | | | 02/03/20 | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | |
| 7 | 3,184.95 | 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NMPC, UBHO, 2 X MONELS, 33 STDS 5" DP, AGITATOR. LENGTH- 3184.95' | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | |
| 7 | 9,870 | | 8.500 | ULTERRA | SPL 616 | 50918 | | | | | 1,095 | | | | | |
| | | | | | | | | | | | 1,095 | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | Location | Bearings/Seals | Gauge | Other Dull Characteristics | Reason Pulled | | | | | | |
| | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | Surveys (Max of 7) | | | KOP: 8,950 | EOC: 9,852 | | | | | | |
| | 186 | 215 | 166 | | 21000 | Survey Type | | | Measured Depth | Inclination | Azimuth | DLS | | | | |
| Pumps | | | | | | | | MWD | | 16,116 | 91.470 | 166.770 | 1.048 | | | |
| | Make/Model | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | | 16,209 | 90.110 | 167.470 | 1.645 | |
| RSF-FB 1600 | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.6 | 500 | | MWD | | 16,301 | 90.290 | 167.470 | 0.196 | |
| RSF-FB 1600 | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.7 | 490 | | MWD | | 16,394 | 90.510 | 167.290 | 0.306 | |
| PZ-10 | | | 10 | 6.50 | 0.0 | 95% | 0.1 | | | MWD | | 16,486 | 91.030 | 167.730 | 0.740 | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | MWD | | | | 16,578 | 89.800 | 167.470 | 1.366 | | | |
| | 134 | 237 | | 230 | 17075 | MWD | | | | 16,670 | 89.270 | 166.940 | 0.815 | | | |
| 24.00 | | Total Hours | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | |
| 12:30 am | 0.50 | 2 | 15,847 | SLIDE DRILL F/ 15,833' T/ 15,847' (14' @ 28 FPH) 500 GPM, 40 WOB, 150 DIFF, TF 160. DRILLING WITH REDUCED PARAMETERS WHILE CHANGING LINERS IN #2 MUDPUMP | | | | | | | | | | | | |
| 6:00 am | 5.50 | 2 | 16,187 | ROTATE DRILL F/ 15,847' T/ 16,187' (340 @ 62 FPH) 520 GPM, 3-400 DIFF, 3675 PSI, 21-30 WOB, 70 RPM, 19-22K TQ. DRILLING ON ONE PUMP WITH REDUCED PARAMETERS WHILE CHANGING PUMP LINERS ON #2 PUMP | | | | | | | | | | | | |
| 8:30 am | 2.50 | 8 | 16,187 | C/O LINER AND GASKET IN #2 MUD PUMP, WORK ON LINER RETAINER ON #1 PUMP | | | | | | | | | | | | |
| 9:30 am | 1.00 | 2 | 16,194 | ROTATE DRILL F/ 16,187' T/ 16,194' (7 @ 7 FPH) 520 GPM, 3-400 DIFF, 3675 PSI, 21-30 WOB, 70 RPM, 19-22K TQ. DRILLING WITH REDUCED PARAMETERS WHILE CHANGING PUMP LINERS ON #1 PUMP | | | | | | | | | | | | |
| 10:30 am | 1.00 | 2 | 16,216 | SLIDE DRILL F/ 16,194' T/ 16,216' (22' @ 22 FPH) 500 GPM, 40 WOB, 150 DIFF, TF 150R. DRILLING WITH REDUCED PARAMETERS WHILE CHANGING LINERS IN #1 MUDPUMP | | | | | | | | | | | | |
| 4:00 pm | 5.50 | 2 | 16,482 | ROTATE DRILL F/ 16,216' T/ 16,482' (266 @ 48 FPH) 500 GPM, 600 DIFF, 3600 PSI, 20 WOB, 70 RPM, 23K TQ. DRILLING WITH REDUCED PARAMETERS WHILE CHANGING PUMP LINERS ON #1 PUMP | | | | | | | | | | | | |
| 4:30 pm | 0.50 | 2 | 16,492 | SLIDE DRILL F/ 16,482' T/ 16,492' (10' @ 20 FPH) 500 GPM, 40 WOB, 150 DIFF, TF 150L. DRILLING WITH REDUCED PARAMETERS WHILE CHANGING LINERS IN #1 MUDPUMP | | | | | | | | | | | | |
| 6:30 pm | 2.00 | 2 | 16,566 | ROTATE DRILL F/ 16,492' T/ 16,566' (74 @ 37 FPH) 500-600 GPM, 600 DIFF, 3600 PSI, 28 WOB, 70 RPM, 21-23K TQ. DRILLING WITH REDUCED PARAMETERS WHILE CHANGING PUMP LINERS ON #1 PUMP | | | | | | | | | | | | |
| 7:00 pm | 0.50 | 2 | 16,580 | SLIDE DRILL F/ 16,566' T/ 16,580' (14' @ 28 FPH) 600 GPM, 40 WOB, 125 DIFF, TF 150L. | | | | | | | | | | | | |
| 9:00 pm | 2.00 | 2 | 16,741 | ROTATE DRILL F/ 16,580' T/ 16,741' (161 @ 81 FPH) 600 GPM, 500 DIFF, 4400 PSI, 28 WOB, 70 RPM, 21-23K TQ. | | | | | | | | | | | | |
| 9:30 pm | 0.50 | 5 | 16,741 | CHANGE OUT LEAKING ROTATING HEAD RUBBER | | | | | | | | | | | | |
| 12:00 am | 2.50 | 2 | 16,928 | ROTATE DRILL F/ 16,741' T/ 16,928' (187 @ 75 FPH) 600 GPM, 500 DIFF, 4400 PSI, 28 WOB, 70 RPM, 21-23K TQ. | | | | | | | | | | | | |

| Additional Comments | Mud / Chemical Used Today |
|--|---------------------------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 | |
| 60 MILE RIG MOVE | |
| RIG MOVE HR 156.5 (6.52 DAYS) | |
| SPUD AT 11:30 HRS ON 1/23/20 | |
| NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED | |
| TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 | |
| INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 | |
| AUDREY OPERATOR #4 | |
| PLAN #8: 9,633' TVD @0 VS 90 INC 167.5 AZIM | |
| PLAN #7: 9,636' TVD @0 VS 90 INC 167.5 AZIM | |
| PLAN #6: 9,629' TVD @0 VS 90 INC 167.5 AZIM | |
| MUD FUEL: DELIVERED 8,399 GAL (27,264 TOTAL) | |
| MUD FUEL: USED 3,999 GAL (13,965 TOTAL) | |
| MUD FUEL REMAINING: 5,000 GAL | |
| RIG DOWN TIME 2.5 HRS (79.5 HRS TOTAL) | |

| Crews | | | |
|---------|-----|---------|--------|
| Morning | Day | Evening | Relief |
| | | | |
| | | | |

| Diesel | Today | Total |
|-----------|-------|--------|
| Delivered | 6,000 | 58,498 |
| On Hand | 9,527 | |
| Used | 2,695 | 48,971 |

| Ton Miles | | |
|----------------------------|--|--|
| Line on Spool: Ft. / Size | | |
| Ton Miles: Current / Total | | |
| Line Cut: Today / Total | | |

| Expenses | | | | | Expenses by Category | |
|----------------------------------|--------------------------|---|---|-----------|-----------------------------------|-----------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost |
| 2250.100 BHA EQUIPMENT RENTAL | STABIL DRILL | 1 | 2- 17" NONMAG IBS, 4 11 3/4" NONMAG IBS, 8" SHOCK SUB | 23,300.00 | 2250.100 BHA EQUIPMENT RENTAL | 23,300.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,223.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 22,928.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 8,800.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 17,820.00 |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.55 RIG FUEL | 12,688.00 |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.65 SUPERVISION | 3,200.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.90 MISC. LABOR AND SERVICES | 600.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | PEREZ BACKHOE | 1 | MOVE CUTTINGS IN RESERVE PIT | 450.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 1,957.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 2 | 1200 GALLONS MUD DIESEL @ \$1.9107/ GAL | 2,538.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 3 | 7199 GALLONS MUD DIESEL @ \$1.9107/ GAL | 15,233.00 | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | |
| 2250.55 RIG FUEL | PILOT THOMAS | 1 | 6000 GALLONS RIG FUEL @ \$1.9107/ GAL | 12,688.00 | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | |
| 2250.90 MISC. LABOR AND SERVICES | LUERA'S WELDING SERVICE | 1 | INSTALL 20" LANDING RING | 600.00 | | |

| | | | | | | | | |
|---|--------------------------|---|---|-----------|-----------------------------------|----------------|-----------|--------|
| Andrews University 28-33 # 1H | | | DRILLING REPORT | | Date | 2/15/2020 Spud | 1/23/2020 | |
| : 00004 API # 4200348217 | | | Throne - Andrews | | Printed | 2/16/2020 TD'd | | |
| Additional Comments | | | | | Mud / Chemical Used Today | | | |
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 PLAN #8: 9,633' TVD @0 VS 90 INC 167.5 AZIM PLAN #7: 9,636' TVD @0 VS 90 INC 167.5 AZIM PLAN #6: 9,629' TVD @0 VS 90 INC 167.5 AZIM MUD FUEL: DELIVERED 6,029 GAL (33,293 TOTAL) MUD FUEL: USED 6529 GAL (13,965 TOTAL) MUDFUEL REMAINING: 4,500 GAL RIG DOWN TIME 1 HRS (80.5 HRS TOTAL) | | | | | | | | |
| | | | | | Crews | | | |
| | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | |
| | | | | | Diesel | | | |
| | | | | | Today | Total | | |
| | | | | | Delivered | 1,200 | 59,698 | |
| | | | | | On Hand | 7,238 | | |
| | | | | | Used | 3,489 | 52,460 | |
| | | | | | Ton Miles | | | |
| Line on Spool: Ft. / Size | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,223.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 20,820.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 8,800.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 17,820.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.55 RIG FUEL | 2,534.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 5,341.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 1 | 6029 GAL OF MUD FUEL | 12,729.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | | | |
| 2250.55 RIG FUEL | PILOT THOMAS | 1 | 1200 GAL OF RIG FUEL | 2,534.00 | | | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | | | |

| Andrews University 28-33 # 1H | | | | | | | | | | DRILLING REPORT | | Date | 2/16/2020 Spud | | 1/23/2020 | |
|--|----------------|--|---------------|--|--------------------------|------------------|---------------|-----------------------------------|--------------|-----------------|----------------------------|-------------|----------------|----------------------------------|-----------|--|
| : 00004 | | API # 4200348217 | | | | Throne - Andrews | | | | Printed | | 2/17/2020 | | TD'd | | |
| Report # | 27 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | AFE # | | 2019D01 | | |
| Depth | 19,809 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | AFE-DH | | \$2,633,990 | | |
| TVD | 9,636 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | Rig Supv | IRVIN GARCIA | | | AFE-Test | | | | |
| Footage | 1,422 | Ft/Hr | | Lithology | 90% SHALE, 10% LIMESTONE | | | Phone | 325-450-1134 | | | AFE-Comp | | | | |
| Present Operations / Executive Summary | | | | | | | | | | | | AFE-Total | | | | |
| LAST 24 HRS: DRILL 8.5" LATERAL F/ 18,387' T/19,809' (1,422' @ 60 FPH) | | | | | | | | Rig Supt | J. WEST | | | Working Int | | | | |
| 00:00 - 06:00 DRILL 8.5" LATERAL F/ 19,809' T/ 20,281' (472' @ 79 FPH) | | | | | | | | Phone | 325-450-4025 | | | Net Int | | | | |
| NEXT 24 HRS: DRILL TO TD @ 20,470', DO CLEANUP CYCLE, TOO H LAYING DOWN DP | | | | | | | | | | | | | | | | |
| Mud | | Mud Company: STELLAR | | | | | | Mud Engineer: GUADELUPE FERNANDEZ | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | |
| OBM | 8.6 | 8.91 | 50 | 11 | 9 | 8 | 14 | 2/32 | 2 | 4.29 | 73.00 | 21.00 | 145 | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | |
| | | | | 42,000 | | | | 1,353 | 388 | 547 | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | |
| | | | | | | | | 13.375 | | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | |
| | | | | | | | | 01/26/20 | | | | | | | | |
| | | | | | | | | 9.625 | | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 | |
| | | | | | | | | 02/03/20 | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | |
| 7 | 3,184.95 | 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NMPC, UBHO, 2 X MONELS, 33 STDS 5" DP, AGITATOR. LENGTH- 3184.95' | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | |
| 7 | 9,870 | | 8.500 | ULTERRA | SPL 616 | 50918 | | | | | 0 | | | | | |
| | | | | | | | | | | | 2,554 | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | | Gauge | Other Dull Characteristics | | Reason Pulled | | | |
| | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | | Torque | | Surveys (Max of 7) | | KOP: 8,950 | | EOC: 9,852 | | | | |
| | 193 | 228 | 130 | | | 24000 | | Survey Type | | Measured Depth | Inclination | Azimuth | DLS | | | |
| Pumps | | | | | | | | MWD | | 19,081 | 90.860 | 166.240 | 2.252 | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | 19,175 | 90.680 | 167.290 | 1.133 | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.6 | 500 | MWD | 19,268 | 92.180 | 169.490 | 2.862 | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.7 | 490 | MWD | 19,363 | 90.330 | 169.750 | 1.966 | | |
| PZ-10 | | | 10 | 6.50 | 0.0 | 95% | 0.1 | | | MWD | 19,457 | 89.410 | 166.060 | 4.046 | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | | Max At @ | | MWD | | 19,551 | 89.410 | 164.300 | 1.872 | | | |
| | 143 | 290 | | 269 | | 18970 | | MWD | | 19,645 | 89.930 | 164.220 | 0.560 | | | |
| 24.00 | | Total Hours | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | |
| 2:30 am | 2.50 | 2 | 18,594 | ROTATE DRILL F/ 18,387' T/ 18,594' (207 @ 104 FPH) 600 GPM, 500 DIFF, 4475 PSI, 25-30 WOB, 70 RPM, 21-23K TQ | | | | | | | | | | | | |
| 4:30 am | 2.00 | 2 | 18,619 | SLIDE DRILL F/ 18,594' T/ 18,619' (25' @ 13 FPH) 600 GPM, 30 WOB, 150 DIFF, TF 45R. | | | | | | | | | | | | |
| 5:30 am | 1.00 | 2 | 18,686 | ROTATE DRILL F/ 18,619' T/ 18,686' (67 @ 67 FPH) 600 GPM, 500 DIFF, 4475 PSI, 25-30 WOB, 70 RPM, 21-23K TQ | | | | | | | | | | | | |
| 6:30 am | 1.00 | 2 | 18,710 | SLIDE DRILL F/ 18,686' T/ 18,710' (24' @ 24 FPH) 600 GPM, 30 WOB, 150 DIFF, TF 30R. | | | | | | | | | | | | |
| 9:00 am | 2.50 | 2 | 18,971 | ROTATE DRILL F/ 18,710' T/ 18,971' (261 @ 104 FPH) 600 GPM, 500 DIFF, 4475 PSI, 25-30 WOB, 70 RPM, 21-23K TQ | | | | | | | | | | | | |
| 10:00 am | 1.00 | 2 | 18,992 | SLIDE DRILL F/ 18,971' T/ 18,992' (21' @ 21 FPH) 600 GPM, 30 WOB, 150 DIFF, TF 25R. | | | | | | | | | | | | |
| 11:00 am | 1.00 | 2 | 19,065 | ROTATE DRILL F/ 18,992' T/ 19,065' (73 @ 73 FPH) 600 GPM, 500 DIFF, 4475 PSI, 25-30 WOB, 70 RPM, 21-23K TQ | | | | | | | | | | | | |
| 1:00 pm | 2.00 | 2 | 19,096 | SLIDE DRILL F/ 19,065' T/ 19,096' (31' @ 16 FPH) 600 GPM, 30 WOB, 150 DIFF, TF 30R. | | | | | | | | | | | | |
| 3:30 pm | 2.50 | 2 | 19,339 | ROTATE DRILL F/ 19,096' T/ 19,339' (243 @ 97 FPH) 600 GPM, 500 DIFF, 4475 PSI, 25-30 WOB, 70 RPM, 21-23K TQ | | | | | | | | | | | | |
| 4:00 pm | 0.50 | 7 | 19,339 | LUBRICATE RIG | | | | | | | | | | | | |
| 4:30 pm | 0.50 | 2 | 19,348 | ROTATE DRILL F/ 19,339' T/ 19,348' (9 @ 18 FPH) 600 GPM, 500 DIFF, 4475 PSI, 25-30 WOB, 70 RPM, 21-23K TQ | | | | | | | | | | | | |
| 5:30 pm | 1.00 | 2 | 19,377 | SLIDE DRILL F/ 19,348' T/ 19,377' (29' @ 29 FPH) 600 GPM, 30 WOB, 150 DIFF, TF 150L. | | | | | | | | | | | | |
| 8:00 pm | 2.50 | 2 | 19,629 | ROTATE DRILL F/ 19,377' T/ 19,629' (252 @ 101 FPH) 600 GPM, 580 DIFF, 4120 PSI, 30 WOB, 70 RPM, 21-23K TQ | | | | | | | | | | | | |
| 9:00 pm | 1.00 | 2 | 19,644 | SLIDE DRILL F/ 19,629' T/ 19,644' (15' @ 15 FPH) 600 GPM, 25 WOB, 150 DIFF, TF 60R. | | | | | | | | | | | | |
| 10:00 pm | 1.00 | 2 | 19,724 | ROTATE DRILL F/ 19,629' T/ 19,724' (80 @ 80 FPH) 600 GPM, 580 DIFF, 4120 PSI, 30 WOB, 70 RPM, 21-23K TQ | | | | | | | | | | | | |
| 11:00 pm | 1.00 | 2 | 19,746 | SLIDE DRILL F/ 19,724' T/ 19,746' (22' @ 22 FPH) 600 GPM, 25 WOB, 150 DIFF, TF 90R. | | | | | | | | | | | | |
| 12:00 am | 1.00 | 2 | 19,809 | ROTATE DRILL F/ 19,746' T/ 19,809' (63 @ 63 FPH) 600 GPM, 600 DIFF, 4150 PSI, 30 WOB, 70 RPM, 21-23K TQ | | | | | | | | | | | | |

| Additional Comments | Mud / Chemical Used Today |
|--|---------------------------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 | |
| 60 MILE RIG MOVE | |
| RIG MOVE HR 156.5 (6.52 DAYS) | |
| SPUD AT 11:30 HRS ON 1/23/20 | |
| NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED | |
| TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 | |
| INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 | |
| PLAN #8: 9,633' TVD @0 VS 90 INC 167.5 AZIM | |
| PLAN #7: 9,636' TVD @0 VS 90 INC 167.5 AZIM | |
| PLAN #6: 9,629' TVD @0 VS 90 INC 167.5 AZIM | |
| MUD FUEL: DELIVERED 1520 GAL (34,793 TOTAL) | |
| MUD FUEL: USED 5270 GAL (19,235 TOTAL) | |
| MUD FUEL REMAINING: 4,500 GAL | |
| RIG DOWN TIME 0 HRS (80.5 HRS TOTAL) | |

| Crews | | | |
|---------|-----|---------|--------|
| Morning | Day | Evening | Relief |
| | | | |
| | | | |

| Diesel | Today | Total |
|-----------|--------|--------|
| Delivered | 5,800 | 65,498 |
| On Hand | 10,137 | |
| Used | 2,901 | 55,361 |

| Ton Miles | | |
|----------------------------|--|--|
| Line on Spool: Ft. / Size | | |
| Ton Miles: Current / Total | | |
| Line Cut: Today / Total | | |

| Expenses | | | | | Expenses by Category | |
|-----------------------------------|----------------------------|---|-------------------------------------|-----------|-----------------------------------|-----------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,223.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 28,407.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.32 TUBULAR/WELLHEAD | 4,240.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.45 DIRECTIONAL | 8,800.00 |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.50 DRILLING DAYWORK | 17,820.00 |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.55 RIG FUEL | 12,246.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.65 SUPERVISION | 3,200.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | CATALYST OILFIELD SERVICES | 1 | CORROSION INHIBITOR | 3,244.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 8,739.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | MULLHOLLAND SERVICES | 1 | WATER BASE TANK CLEAN OUT | 10,507.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | PILOT THOMAS | 1 | 1830 GAL OF MUD FUEL | 3,167.00 | | |
| 2250.32 TUBULAR/WELLHEAD | SMOB SERVICES | 1 | CLEAN DRIFT & TALLY 5.5" CSG | 4,240.00 | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | |
| 2250.55 RIG FUEL | PILOT THOMAS | 1 | 5800 GAL OF RIG FUEL | 12,246.00 | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | |

Andrews University 28-33 # 1H

: 00004 API # 4200348217

DRILLING REPORT

Throne - Andrews

Date

2/17/2020

Spud

1/23/2020

Printed

2/18/2020

TD'd

2/17/2020

| | | | | | | | | | | | | | | |
|---|--------|-----------|---------|-----------|--------------|-------|----|----------|--------------|--|--|--|-------------|-------------|
| Report # | 28 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | | AFE # | 2019D01 |
| Depth | 20,470 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | | AFE-DH | \$2,633,990 |
| TVD | 9,626 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | Rig Supv | IRVIN GARCIA | | | | AFE-Test | |
| Footage | 661 | Ft/Hr | 73.4 | Lithology | | | | Phone | 325-450-1134 | | | | AFE-Comp | |
| Present Operations / Executive Summary | | | | | | | | Rig Supt | J. WEST | | | | AFE-Total | |
| LAST 24 HRS: DRILL 8.5" LATERAL F/ 19,809' T/20,470' (661' @ FPH) CTCH, L/D DRILL PIPE T/ 13,000', 00:00 - 06:00: LAY DOWN DRILL PIPE TO 7,500' | | | | | | | | Phone | 325-450-4025 | | | | Working Int | |
| NEXT 24 HRS: TOO H LAYING DOWN DP, PULL WEAR BUSH, RIG UP & RUN 5.5" CASING | | | | | | | | Net Int | | | | | | |

Mud

Mud Company: STELLAR

Mud Engineer: GUADELUPE FERNANDEZ

| | | | | | | | | | | | | | |
|----------|------|------|-----|----|----|-------------|------------|------|----|--------|-------|---------|------------|
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses |
| OBM | 8.65 | 8.99 | 50 | 10 | 9 | 8 | 14 | 2/32 | 10 | 5.28 | 73.00 | 20.00 | 41 |

| | | | | | | | | | | | | | |
|----|----|----|----|--------|----|-----|---------------|----------|---------|------------|------------|---------|-----------|
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ |
| | | | | 42,000 | | | | 1,412 | 335 | 547 | | | |

Drill Pipe & Collars (top to bottom) Kelly Down:

Casing

| | | | | | | | | | | | | | | | |
|-------|--------|------|----|----|------|-------|---------|--------------------|----------|----------|-----------|------|-------|-------|----------|
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest |
| | | | | | | | | 13.375 01/26/20 | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | |
| | | | | | | | | 9.625 02/03/20 | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|-------|----------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | |
| 7 | 3,184.95 | | 8.5" ULTERRA SPL616 PDC BIT, 7" 5/6 LOBE 8.2 STAGE SLICK MUD MOTOR FBH @ 1.75° RPG .41. FLOAT SUB, NMPC, UBHO, 2 X MONELS, 33 STDS 5" DP, AGITATOR. LENGTH- 3184.95' | | | | | | | | | | | | |

Bit

| | | | | | | | | | | | | | | |
|---|-------|--------|-------|---------|---------|----------|------|--------|-----|---------|----------|---------|-------|--------|
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP |
| 7 | 9,870 | 20,470 | 8.500 | ULTERRA | SPL 616 | 50918 | | | | | 661 | 9.00 | 73.4 | |
| | | | | | | | | | | | 10,600 | 148.50 | 71.4 | |

| | | | | | | | | | | |
|-----------|---|-------|-------|-------|----------------------|----------|----------------|-------|----------------------------|---------------|
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | Location | Bearings/Seals | Gauge | Other Dull Characteristics | Reason Pulled |
| | | | | | | | | | | |

String Loads

Surveys (Max of 7)

KOP: 8,950

EOC: 9,852

| | | | | | | | | | |
|-----------|-------------|---------------|-------------|--------|-------------|----------------|-------------|---------|-----|
| Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | Survey Type | Measured Depth | Inclination | Azimuth | DLS |
| 193 | 228 | 130 | | 24000 | | | | | |

Pumps

MWD

19,834

91.250

166.240

1.257

| | | | | | | | | | | | | | |
|-------------|-------|--------|-------|------|------|-----|-----|-----|-----|--------|--------|---------|-------|
| Make/Model | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | MWD | 19,928 | 92.570 | 166.240 | 1.404 |
| RSF-FB 1600 | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.6 | 500 | MWD | 20,022 | 90.240 | 166.410 | 2.485 |
| RSF-FB 1600 | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.7 | 490 | MWD | 20,116 | 90.370 | 166.240 | 0.228 |
| PZ-10 | | 10 | 6.50 | 0.0 | 95% | 0.1 | | | MWD | 20,211 | 90.150 | 165.360 | 0.955 |

Gas

MWD

20,305

91.820

167.030

2.512

| | | | | | | | | | |
|----------------|----------------|----------|---------|----------|-----|--------|--------|---------|-------|
| Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | MWD | 20,399 | 92.090 | 167.560 | 0.632 |
|----------------|----------------|----------|---------|----------|-----|--------|--------|---------|-------|

24.00

Total Hours

Daily Operations

Report Time: 12:00 am - 12:00 am

| | | | | |
|----------|-------|------|--------|--|
| End | Hours | Code | Depth | Operations |
| 2:30 am | 2.50 | 2 | 20,006 | ROTATE DRILL F/ 19,809' T/ 20,006' (197 @ 79 FPH) 600 GPM, 600 DIFF, 4150 PSI, 30 WOB, 70 RPM, 21-23K TQ |
| 3:30 am | 1.00 | 2 | 20,029 | SLIDE DRILL F/ 20,006' T/ 20,029' (23' @ 23 FPH) 600 GPM, 25 WOB, 150 DIFF, TF 150R. |
| 9:00 am | 5.50 | 2 | 20,470 | ROTATE DRILL F/ 20,029' T/ 20,470' (441 @ 80 FPH) 600 GPM, 600 DIFF, 4150 PSI, 30 WOB, 70 RPM, 21-23K TQ |
| 3:30 pm | 6.50 | 5 | 20,470 | PERFORM CLEAN UP CYCLE, 6 BOT UP, WORKING 90' UP & ROTATING 80 RPM'S DOWN PUMP 630 GPM'S. SHAKERS CLEANED UP. R/U LAY DOWN TRUCK WHILE CIRCULATING, PUMP FLUID CALLIPER SWEEP, 2% CALCULATED WASHOUT |
| 4:00 pm | 0.50 | 6 | 20,470 | FLOW CHECK, (WELL IS STATIC) PUMP SLUG AND PULL 10 STANDS. HOLE IS SLICK |
| 12:00 am | 8.00 | 6 | 20,470 | LAY DOWN DRILL PIPE TO 13,000' |

| Additional Comments | Mud / Chemical Used Today |
|--|---------------------------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 | |
| 60 MILE RIG MOVE | |
| RIG MOVE HR 156.5 (6.52 DAYS) | |
| SPUD AT 11:30 HRS ON 1/23/20 | |
| NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED | |
| TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 | |
| INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 | |
| PLAN #8: 9,633' TVD @0 VS 90 INC 167.5 AZIM | |
| PLAN #7: 9,636' TVD @0 VS 90 INC 167.5 AZIM | |
| PLAN #6: 9,629' TVD @0 VS 90 INC 167.5 AZIM | |
| MUD FUEL: DELIVERED 0 GAL (34,793 TOTAL) | |
| MUD FUEL: USED 0 GAL (19,235 TOTAL) | |
| MUD FUEL REMAINING: 0 GAL | |
| RIG DOWN TIME 0 HRS (80.5 HRS TOTAL) | |

| Crews | | | |
|----------------------------|-------|---------|--------|
| Morning | Day | Evening | Relief |
| | | | |
| | | | |
| Diesel | | | |
| Today | Total | | |
| Delivered | 0 | 65,498 | |
| On Hand | 8,075 | | |
| Used | 2,062 | 57,423 | |
| Ton Miles | | | |
| Line on Spool: Ft. / Size | | | |
| Ton Miles: Current / Total | | | |
| Line Cut: Today / Total | | | |

| Expenses | | | | | Expenses by Category | |
|-----------------------------------|--------------------------|---|---|-----------|-----------------------------------|-----------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,223.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 13,156.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.45 DIRECTIONAL | 8,800.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.50 DRILLING DAYWORK | 17,820.00 |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.60 MUD LOGGING & GEO | 2,330.00 |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.65 SUPERVISION | 3,200.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | CHIEF OILFIELD SERVICES | 1 | SHAKER SCREENS | 1,590.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 8,816.00 | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 8,800.00 | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | |
| 2250.60 MUD LOGGING & GEO | DATALOG GEOLOGICAL | 1 | DAILY MUDLOGGER COST (\$1080/ DAY) | 1,080.00 | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | JOHNSON SPECIALTY TOOLS | 4 | 1" DIESEL TRANSFER PUMP | 35.00 | | |

| | | | | | | | | | | | | | | | | | |
|--|----------------|----------------------|---------------|---|----------------------|-------------|--|-----------------------------------|--------------|----------------------------|-------------|---------------|-------------|----------------------------------|-------------|------|-----------|
| Andrews University 28-33 # 1H | | | | | | | | | | DRILLING REPORT | | | | Date | 2/18/2020 | Spud | 1/23/2020 |
| : 00004 API # 4200348217 | | | | | | | | | | Throne - Andrews | | | | Printed | 2/19/2020 | TD'd | 2/17/2020 |
| Report # | 29 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | | AFE # | 2019D01 | | | |
| Depth | 20,470 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | | Phone | | | | | AFE-DH | \$2,633,990 | | |
| TVD | 9,622 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | | Rig Supv | IRVIN GARCIA | | | | AFE-Test | | | |
| Footage | 0 | Ft/Hr | | Lithology | | | | | Phone | 325-450-1134 | | | | AFE-Comp | | | |
| Present Operations / Executive Summary | | | | | | | | Rig Supt | J. WEST | | | | AFE-Total | | | | |
| LAST 24 HRS: LAY DOWN PIPE F/ 13,000', LDBHA, RIG UP AND RUN PROD CSG TO 2,700' | | | | | | | | Phone | 325-450-4025 | | | | Working Int | | | | |
| 00:00 - 06:00: RUN PRODUCTION CASING F/ 2,700' T/ 8,800' | | | | | | | | | | | | | | | | | |
| NEXT 24 HOURS: RUN PRODUCTION CASING, CEMENT, SET SLIPS, NIPPLE DOWN, WASH MUD TANKS | | | | | | | | | | | | | | | | | |
| Mud | | Mud Company: STELLAR | | | | | | Mud Engineer: GUADELUPE FERNANDEZ | | | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | | |
| OBM | 8.6 | | 57 | 10 | 10 | 8 | 14 | 2/32 | 10 | 5.33 | 73.00 | 20.00 | 0 | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | | |
| | | | | 41,000 | | | | 1,549 | 198 | 547 | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | | |
| | | | | | | | | 13.375 01/26/20 | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | | | |
| | | | | | | | | 9.625 02/03/20 | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | | |
| 7 | 9,870 | 20,470 | 8.500 | ULTERRA | SPL 616 | 50918 | | | | | 0 10,600 | 148.50 | 71.4 | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | Gauge | Other Dull Characteristics | | Reason Pulled | | | | | |
| | 7 | 20,470 | 1 | 5 | BROKEN CUTTERS | | T | X | 1 | BROKEN CUTTERS | | TD | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | Torque | | Surveys (Max of 7) KOP: 8,950 EOC: 9,852 | | | | | | | | | | |
| | | | | | | | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | | | | |
| Pumps | | | | | | | MWD | | | | | | | | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | | | | | | | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.6 | 500 | | | | | | | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.7 | 490 | | | | | | | | |
| PZ-10 | | | 10 | 6.50 | 0.0 | 95% | 0.1 | | | | | | | | | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 24.00 | | Total Hours | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | | |
| 4:00 am | 4.00 | 6 | 20,470 | LAY DOWN DRILL PIPE F/ 13,000' T/ 8,869', MONITORING WELL AT TRIP TANK | | | | | | | | | | | | | |
| 4:30 am | 0.50 | 6 | 20,470 | 30 MINUTE FLOW CHECK, WELL IS STATIC | | | | | | | | | | | | | |
| 9:30 am | 5.00 | 6 | 20,470 | LAY DOWN DRILL PIPE F/ 8,869' T/ 3,100', MONITORING WELL AT TRIP TANK | | | | | | | | | | | | | |
| 10:00 am | 0.50 | 6 | 20,470 | TIH WITH 5 STANDS FROM DERRICK | | | | | | | | | | | | | |
| 3:00 pm | 5.00 | 6 | 20,470 | LAY DOWN DRILL PIPE F/ 3,100' T/ BHA, MONITORING WELL AT TRIP TANK | | | | | | | | | | | | | |
| 5:00 pm | 2.00 | 20 | 20,470 | LAY DOWN MONEL & PULL MWD TOOL, DRAIN MOTOR & BREAK BIT. LAY OUT MOTOR & DIR TOOLS | | | | | | | | | | | | | |
| 6:00 pm | 1.00 | 6 | 20,470 | PULL WEAR BUSHING & CLEAR FLOOR | | | | | | | | | | | | | |
| 8:00 pm | 2.00 | 12 | 20,470 | HOLD PJSM, RIG UP CASING CREW, TORQUE TURN AND CRT. HAD TO WORK ON LINKAGE FOR LAY DOWN TROUGH AND ADJUST FLAGPOLE | | | | | | | | | | | | | |
| 12:00 am | 4.00 | 12 | 20,470 | RUN 5.5" 20# HCP110 BKHT CSG AS FOLLOWS: FLOAT SHOE (20,465'), ONE JT, FLOAT COLLAR (20,420'), ONE JT, OSP TOE SLEEVE (14.5K), 66 JTS TO 2,700' | | | | | | | | | | | | | |

| Additional Comments | | | | | Mud / Chemical Used Today | | | |
|--|--------------------------|---|---|-----------|-----------------------------------|-----------|---------|--------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 PRODUCTION CSG & CEMENT: 2/18/20 @ 06:30 LINDA OPERATOR #8 PLAN #8: 9,633' TVD @0 VS 90 INC 167.5 AZIM PLAN #7: 9,636' TVD @0 VS 90 INC 167.5 AZIM PLAN #6: 9,629' TVD @0 VS 90 INC 167.5 AZIM MUD FUEL: DELIVERED 0 GAL (34,793 TOTAL) MUD FUEL: USED 0 GAL (19,235 TOTAL) MUD FUEL REMAINING: 0 GAL RIG DOWN TIME 0 HRS (80.5 HRS TOTAL) | | | | | | | | |
| | | | | | Crews | | | |
| | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | Diesel | | | |
| | | | | | Delivered | | 65,498 | |
| | | | | | On Hand | 6,900 | | |
| | | | | | Used | | 58,598 | |
| | | | | | Ton Miles | | | |
| Line on Spool: Ft. / Size | | | | | | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,223.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.25 DRILLING MUD & CHEMICALS | 4,526.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.30 TRANSPORTATION | 1,380.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.45 DIRECTIONAL | 9,300.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.50 DRILLING DAYWORK | 17,820.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.60 MUD LOGGING & GEO | 1,250.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | | | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 1,776.00 | | | | |
| 2250.30 TRANSPORTATION | BIG STATE TRUCKING | 1 | BACK HAUL DIRECTIONAL TOOLS | 1,380.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 9,300.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 1,250.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD (\$55/ DAY), ORBIT VALVE (\$60/ DAY), 67" | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 150.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | JOHNSON SPECIALTY TOOLS | 4 | 1" DIESEL TRANSFER PUMP | 35.00 | | | | |

Andrews University 28-33 # 1H

: 00004 API # 4200348217

DRILLING REPORT

Throne - Andrews

Date

2/19/2020

Spud

1/23/2020

Printed

2/20/2020

TD'd

2/17/2020

Report #

30

Prop TD

20,304

County

Andrews

State

TX

Rig

Sendero 15

AFE #

2019D01

Depth

20,470

GL

3,017.0

Co Supv

W. TRAMMELL

Phone

AFE-DH

\$2,633,990

TVD

9,622

'KB' corr

0.0

Phone

346-444-8591

Rig Supv

IRVIN GARCIA

AFE-Test

Footage

0

Ft/Hr

Lithology

Phone

325-450-1134

AFE-Comp

Present Operations / Executive Summary

Rig Supt

J. WEST

AFE-Total

LAST 24 HRS: RUN PROD CASING T/ 20,465', CEMENT 00:00 - 06:00: RIG DOWN CEMENTERS, NIPPLE DOWN, WASH MUD TANKS

Phone

325-450-4025

Working Int

Net Int

NEXT 24 HOURS: RIG DOWN CEMENTERS, NIPPLE DOWN, SET SLIPS, WASH MUD TANKS, RELEASE RIG, PREPARE FOR RIG MOVE

Mud

Mud Company: STELLAR

Mud Engineer: GUADELUPE FERNANDEZ

Mud Type

M W

ECD

Vis

PV

YP

Gel-Initial

Gel-10 min

Cake

WL

Solids

% Oil

% Water

Mud Losses

OBM

pH

Pm

Pf

Mf

CL

CA

LCM

Washout(%vol)

Hole Vol

Pit Vol

Stored Vol

Min To Bit

Btms Up

Full Circ

Drill Pipe & Collars (top to bottom) Kelly Down:

Casing

Jts

Length

Size

Wt

ID

Type

Grade

Ann Vel

Size/Date

Top (MD)

Btm (MD)

Btm (TVD)

Wt

Grade

TOC

ShoeTest

13.375

0

1,819

1,819

54.5

J55

0

01/26/20

9.625

0

8,844

8,843

40

J55

3,016

02/03/20

5.500

0

20,465

9,622

20

P110

4,920

02/19/20

BHA #

Length

Weight

BHA Summary

Bit

#

In @

Out @

Size

Mfg.

Type

Serial #

RPMs

Jets

WOB

BHA Eff

Feet/Ttl

Hrs/Ttl

Ft/Hr

Bit HP

Bit Grade

#

Depth

Inner

Outer

Dull Characteristics

Location

Bearings/Seals

Gauge

Other Dull Characteristics

Reason Pulled

String Loads

Hook Load

Drag Up (+)

Drag Down (-)

Max Allowed

Torque

Surveys (Max of 7)

KOP: 8,950

EOC: 9,852

Survey Type

Measured Depth

Inclination

Azimuth

DLS

Pumps

Make/Model

PSI

Stroke

Liner

SPM

Eff.

GPS

GPM

SPR

RSF-FB 1600

2,300

12

6.00

70.0

95%

0.1

6.6

500

RSF-FB 1600

2,300

12

6.00

70.0

95%

0.1

6.7

490

PZ-10

10

6.50

0.0

95%

0.1

Gas

Background Gas

Connection Gas

Trip Gas

Max Gas

Max At @

24.00

Total Hours

Daily Operations

Report Time: 12:00 am - 12:00 am

End

Hours

Code

Depth

Operations

9:00 am

9.00

12

20,470

RUN 5.5" 20# P110 BKHT CSG AS FOLLOWS: FLOAT SHOE (20,465'), ONE JT, FLOAT COLLAR (20,420'), ONE JT, OSP TOE SLEEVE (14.5K), 87 JTS, MARKER JT (16,822'), 84 JTS, MARKER JT (13,368'), 83 JTS, MARKER JT (9,949'), 29 JTS, MARKER JT (8,737') 214 JTS TO SFC

5:00 pm

8.00

12

20,470

TOTAL 499 JTS. ONE SOLID BODY CENTRALIZER 5' ABOVE SHOE AND COLLAR, ONE CENT 5' ABOVE AND BELOW THE TOE VALVE, ONE CENT EVERY OTHER JT F/ 9,949' T/ 8,799'. RAN A TOTAL OF 19 CENTRALIZERS

8:00 pm

3.00

5

20,470

CIRCULATE ONE AND A HALF CASING CAPACITY, HOLD PJSM WITH ALL PERSONNEL, RIG UP CEMENT LINES

10:00 pm

2.00

12

20,470

CEMENT 5.5" PRODUCTION CSG: TEST LINES TO 6,000 PSI. PUMP 40 BBL BARITE SPCR (9.1 PPG) PUMPED AT 5-6 BPM, 333 BBL OF SCAVENGER CEMENT (225 SX, 9.0# , 9.34 YD) PUMPED AT 6.5 BPM, AND 660 BBL OF TAIL CEMENT (2130 SX, 13.2 PPG, 1.74 YD) PUMPED AT 6.5-7 BPM

12:00 am

2.00

12

20,470

DISP WITH 20 BBL OF SUGAR WATER AND 433 BBL OF F/W AT 8 BPM, SLOWED TO 4 BPM THE LAST 30 BBL. FINAL PSI AT 8 BPM WAS 2050, FINAL PSI AT 4 BPM WAS 1300. BUMPED PLUG, TOOK TO 2300 PSI F/ 5 MIN. BLED BACK 4 BBLs, FLOATS HELD. 73 BBL SCVGR CMT TO SFC

| Additional Comments | | | | | Mud / Chemical Used Today | | | |
|--|--------------------------|---|-------------------------------------|-----------|-----------------------------------|------------|---------|--------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 60 MILE RIG MOVE RIG MOVE HR 156.5 (6.52 DAYS) SPUD AT 11:30 HRS ON 1/23/20 NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 PRODUCTION CSG & CEMENT: 2/18/20 @ 06:30 LINDA OPERATOR #8 PLAN #8: 9,633' TVD @0 VS 90 INC 167.5 AZIM PLAN #7: 9,636' TVD @0 VS 90 INC 167.5 AZIM PLAN #6: 9,629' TVD @0 VS 90 INC 167.5 AZIM MUD FUEL: DELIVERED 0 GAL (34,793 TOTAL) MUD FUEL: USED 0 GAL (19,235 TOTAL) MUD FUEL REMAINING: 0 GAL RIG DOWN TIME 0 HRS (80.5 HRS TOTAL) | | | | | | | | |
| | | | | | Crews | | | |
| | | | | | Morning | Day | Evening | Relief |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | Diesel | | | |
| | | | | | Delivered | | 65,498 | |
| | | | | | On Hand | 5,714 | | |
| | | | | | Used | | 59,784 | |
| | | | | | Ton Miles | | | |
| | | | | | Line on Spool: Ft. / Size | | | |
| Ton Miles: Current / Total | | | | | | | | |
| Line Cut: Today / Total | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Expenses | | | | | Expenses by Category | | | |
| Category | Company / Vendor | # | Description | Cost | Category | Cost | | |
| 2250.100 BHA EQUIPMENT RENTAL | NOV DOWNHOLE | 1 | AGITATOR RENTAL | 16,000.00 | 2250.100 BHA EQUIPMENT RENTAL | 16,000.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 578.00 | 2250.105 SURFACE RENTALS | 2,223.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 45.00 | 2250.20 CEMENT & CEMENT SERVICES | 78,800.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 125.00 | 2250.25 DRILLING MUD & CHEMICALS | 3,706.00 | | |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 195.00 | 2250.32 TUBULAR/WELLHEAD | 32,625.00 | | |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 60.00 | 2250.45 DIRECTIONAL | 0.00 | | |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 730.00 | 2250.50 DRILLING DAYWORK | 17,820.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 140.00 | 2250.60 MUD LOGGING & GEO | 0.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 25.00 | 2250.65 SUPERVISION | 3,200.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 160.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,857.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 4 | MANIFOLD | 15.00 | 2350.25 PRODUCTION | 283,913.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 150.00 | 2350.45 CASING ACCESSORIES | 11,678.00 | | |
| 2250.20 CEMENT & CEMENT SERVICES | OSP | 2 | FIELD OPERATOR FOR TOE VALVE | 3,437.00 | | | | |
| 2250.20 CEMENT & CEMENT SERVICES | WEST TEXAS CEMENTERS | 1 | CEMENT PRODUCTION CASING | 75,363.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 2,750.00 | | | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 956.00 | | | | |
| 2250.32 TUBULAR/WELLHEAD | SOUTHERN CONNECTIONS | 1 | CSG CREW, CRT, TQ TURN, THREAD REP | 20,825.00 | | | | |
| 2250.32 TUBULAR/WELLHEAD | PERMIAN POWER TONG | 1 | LAY DOWN TRUCK FOR CSG JOB | 11,800.00 | | | | |
| 2250.45 DIRECTIONAL SERVICES | PREMIER DIRECTIONAL | 1 | DIRECTIONAL SERVICES | 0.00 | | | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 17,820.00 | | | | |
| 2250.60 MUD LOGGING & GEO | NOW GEOCONSULTANTS | 1 | GEOSTEERING | 0.00 | | | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 1,600.00 | | | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 200.00 | | | | |

| | | | | | | | | | | | | | | | | | |
|---|----------------|----------------------|---------------|--|----------------------|-------------|---------------|--|----------------|-----------------------------------|----------------------------|---------|---------------|----------------------------------|-----------|------|-----------|
| Andrews University 28-33 # 1H | | | | | | | | | | DRILLING REPORT | | | | Date | 2/20/2020 | Spud | 1/23/2020 |
| : 00004 API # 4200348217 | | | | | | | | | | Throne - Andrews | | | | Printed | 2/20/2020 | TD'd | 2/17/2020 |
| Report # | 31 | Prop TD | 20,304 | County | Andrews | State | TX | Rig | Sendero 15 | | | | AFE # | 2019D01 | | | |
| Depth | 20,470 | GL | 3,017.0 | Co Supv | W. TRAMMELL | | | Phone | | | | | AFE-DH | \$2,633,990 | | | |
| TVD | 9,622 | 'KB' corr | 0.0 | Phone | 346-444-8591 | | | Rig Supv | TONY MITCHELL | | | | AFE-Test | | | | |
| Footage | 0 | Ft/Hr | | Lithology | | | | Phone | 325-450-1134 | | | | AFE-Comp | \$5,537,042 | | | |
| Present Operations / Executive Summary | | | | | | | | Rig Supt | J. WEST | | | | AFE-Total | \$8,171,032 | | | |
| LAST 24 HOURS: RIG DOWN CEMENTERS, NIPPLE DOWN, SET SLIPS, WASH PITS, RELEASE RIG @ 12:00 PM, 2/20/2020 | | | | | | | | Phone | 325-450-4025 | | | | Working Int | | | | |
| | | | | | | | | Net Int | | | | | | | | | |
| NEXT 24 HOURS: RIG DOWN, MOVE RIG WITH WILBANKS TRUCKING TO ANDREWS UNIVERSITY 29-32 1H | | | | | | | | | | | | | | | | | |
| Mud | | Mud Company: STELLAR | | | | | | | | Mud Engineer: GUADELUPE FERNANDEZ | | | | | | | |
| Mud Type | M W | ECD | Vis | PV | YP | Gel-Initial | Gel-10 min | Cake | WL | Solids | % Oil | % Water | Mud Losses | | | | |
| OBM | | | | | | | | | | | | | | | | | |
| pH | Pm | Pf | Mf | CL | CA | LCM | Washout(%vol) | Hole Vol | Pit Vol | Stored Vol | Min To Bit | Btms Up | Full Circ | | | | |
| | | | | | | | | | | | | | | | | | |
| Drill Pipe & Collars (top to bottom) Kelly Down: | | | | | | | | Casing | | | | | | | | | |
| # Jts | Length | Size | Wt | ID | Type | Grade | Ann Vel | Size/Date | Top (MD) | Btm (MD) | Btm (TVD) | Wt | Grade | TOC | ShoeTest | | |
| | | | | | | | | 13.375 01/26/20 | 0 | 1,819 | 1,819 | 54.5 | J55 | 0 | | | |
| | | | | | | | | 9.625 02/03/20 | 0 | 8,844 | 8,843 | 40 | J55 | 3,016 | | | |
| | | | | | | | | 5.500 02/19/20 | 0 | 20,465 | 9,622 | 20 | P110 | 4,920 | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| BHA # | Length | Weight | BHA Summary | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| Bit | | | | | | | | | | | | | | | | | |
| # | In @ | Out @ | Size | Mfg. | Type | Serial # | RPMs | # Jets | WOB | BHA Eff | Feet/Ttl | Hrs/Ttl | Ft/Hr | Bit HP | | | |
| | | | | | | | | | | | | | | | | | |
| Bit Grade | # | Depth | Inner | Outer | Dull Characteristics | | Location | Bearings/Seals | | Gauge | Other Dull Characteristics | | Reason Pulled | | | | |
| | | | | | | | | | | | | | | | | | |
| String Loads | Hook Load | Drag Up (+) | Drag Down (-) | Max Allowed | | Torque | | Surveys (Max of 7) KOP: 8,950 EOC: 9,852 | | | | | | | | | |
| | | | | | | | | Survey Type | Measured Depth | Inclination | Azimuth | DLS | | | | | |
| Pumps | | | | | | | | | | | | | | | | | |
| Make/Model | | PSI | Stroke | Liner | SPM | Eff. | GPS | GPM | SPR | | | | | | | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.6 | 500 | | | | | | | | |
| RSF-FB 1600 | | 2,300 | 12 | 6.00 | 70.0 | 95% | 0.1 | 6.7 | 490 | | | | | | | | |
| PZ-10 | | | 10 | 6.50 | 0.0 | 95% | 0.1 | | | | | | | | | | |
| Gas | Background Gas | Connection Gas | Trip Gas | Max Gas | Max At @ | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 12.00 | | Total Hours | | Daily Operations | | | | | | | | | | Report Time: 12:00 am - 12:00 am | | | |
| End | Hours | Code | Depth | Operations | | | | | | | | | | | | | |
| 2:30 am | 2.50 | 12 | 20,470 | MONITOR WELL F/ 30 MINUTES, RIG DOWN CEMENT LINES AND FLUSH THROUGH BOP STACK, CHOKE AND MUD LINES | | | | | | | | | | | | | |
| 7:00 am | 4.50 | 14 | 20,470 | NIPPLE DOWN BOP, RIG DOWN AND REMOVE ORBIT VALVE AND FLOWLINE. GASKETS ON DRESSER SLEEVE WERE STUCK TO FLOWLINE, HAD TO HAMMER DRESSER SLEEVE OFF. | | | | | | | | | | | | | |
| 7:30 am | 0.50 | 14 | 20,470 | LIFT BOP STACK, SET 175K ON SLIPS | | | | | | | | | | | | | |
| 10:00 am | 2.50 | 14 | 20,470 | FINISH NIPPLE DOWN, SET AND TORQUE CAP ON WELLHEAD. | | | | | | | | | | | | | |
| 12:00 pm | 2.00 | 24 | 20,470 | WASH MUD TANKS, RELEASE RIG @ 12:00 PM, 2/20/2020 | | | | | | | | | | | | | |

| Additional Comments | Mud / Chemical Used Today |
|--|---------------------------|
| RR FROM AQUATERRA 2300 HRS 1/16/20 | |
| 60 MILE RIG MOVE | |
| RIG MOVE HR 156.5 (6.52 DAYS) | |
| SPUD AT 11:30 HRS ON 1/23/20 | |
| RELEASE RIG AT 12:00 HRS ON 2/20/20 | |
| NO ACCIDENTS, INCIDENTS OR SPILLS REPORTED | |
| TRRC NOTIFICATIONS:SPUD AND RUN 13 3/8" CSG ON 1/22/20 @ 9 AM / JOB # 210260 | |
| INTERMEDIATE CSG & CEMENT: 2/2/20 @ 15:50 AUDREY OPERATOR #4 | |
| PRODUCTION CSG & CEMENT: 2/18/20 @ 06:30 LINDA OPERATOR #8 | |
| PLAN #8: 9,633' TVD @0 VS 90 INC 167.5 AZIM | |
| PLAN #7: 9,636' TVD @0 VS 90 INC 167.5 AZIM | |
| PLAN #6: 9,629' TVD @0 VS 90 INC 167.5 AZIM | |
| MUD FUEL: DELIVERED 0 GAL (34,793 TOTAL) | |
| MUD FUEL: USED 0 GAL (19,235 TOTAL) | |
| MUD FUEL REMAINING: 0 GAL | |
| RIG DOWN TIME 0 HRS (80.5 HRS TOTAL) | |

| Crews | | | |
|----------------------------|-------|---------|--------|
| Morning | Day | Evening | Relief |
| | | | |
| | | | |
| Diesel | | | |
| Today | Total | | |
| Delivered | | 65,498 | |
| On Hand | 5,545 | | |
| Used | | 59,953 | |
| Ton Miles | | | |
| Line on Spool: Ft. / Size | | | |
| Ton Miles: Current / Total | | | |
| Line Cut: Today / Total | | | |

| Expenses | | | | | Expenses by Category | |
|-----------------------------------|--------------------------|---|---------------------------------------|----------|-----------------------------------|----------|
| Category | Company / Vendor | # | Description | Cost | Category | Cost |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 1 | FOUR LIVING QUARTERS | 289.00 | 2250.105 SURFACE RENTALS | 1,103.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 2 | TRASH TRAILER/ PORTA JOHN | 22.00 | 2250.25 DRILLING MUD & CHEMICALS | 2,892.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 3 | GENERATOR AND TRANSFORMER | 62.00 | 2250.32 TUBULAR/WELLHEAD | 6,176.00 |
| 2250.105 SURFACE RENTALS | STELLAR OILFIELD RENTALS | 4 | INTERNET AND COMMUNICATIONS | 98.00 | 2250.50 DRILLING DAYWORK | 8,910.00 |
| 2250.105 SURFACE RENTALS | LUCKY HEALTH & SAFETY | 1 | H2S MONITORING EQUIPMENT | 30.00 | 2250.65 SUPERVISION | 1,600.00 |
| 2250.105 SURFACE RENTALS | WATERFLEET | 1 | WATER TREATMENT PLANT FOR CAMP | 365.00 | 2250.90 MISC. LABOR AND SERVICES | 700.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 1 | FOUR LIGHT TOWERS | 70.00 | 2250.95 DRILLING EQUIPMENT RENTAL | 1,221.00 |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 2 | 300 GALLON FUEL TANK | 12.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 3 | TWO 6X6 PUMPS | 80.00 | | |
| 2250.105 SURFACE RENTALS | JOHNSON SPECIALTY TOOLS | 5 | KATCH KAN | 75.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STAGE 3 SEPARATION | 1 | EQUIPMENT & LABOR DAILY COSTS | 1,375.00 | | |
| 2250.25 DRILLING MUD & CHEMICALS | STELLAR DRILLING FLUIDS | 1 | MUD COSTS | 1,517.00 | | |
| 2250.32 TUBULAR/WELLHEAD | SWECO | 1 | CUT CASING, SET SLIPS | 2,086.00 | | |
| 2250.32 TUBULAR/WELLHEAD | BATTLE ENERGY SERVICES | 1 | NIPPLE DOWN BOPS | 4,090.00 | | |
| 2250.50 DRILLING DAYWORK | SENDERO | 1 | DAYWORK @ \$17,500/DAY PLUS OBM PAY | 8,910.00 | | |
| 2250.65 SUPERVISION | RIG UP | 1 | SUPERVISION | 800.00 | | |
| 2250.65 SUPERVISION | SIERRA HAMILTON | 1 | SUPERVISION | 800.00 | | |
| 2250.90 MISC. LABOR AND SERVICES | STS | 1 | PICK UP CASING THREAD PROTECTORS | 700.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | SENDERO | 2 | FORKLIFT RENTAL | 100.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | HALLIBURTON | 1 | ROTATING HEAD, ORBIT VALVE, 67" SPOOL | 75.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LUCKY HEALTH & SAFETY | 1 | 5 FRAC TANKS | 75.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | LARIAT EQUIP & SERVICES | 1 | MANLIFT RENTAL | 75.00 | | |
| 2250.95 DRILLING EQUIPMENT RENTAL | JOHNSON SPECIALTY TOOLS | 4 | 1" DIESEL TRANSFER PUMP | 18.00 | | |
| | | | | | | |

