

**BYRD OPERATING COMPANY
DAILY DRILLING REPORT
UNIVERSITY "1-4" NO. 1
UPTON COUNTY, TEXAS**

LOCATION: 1121' FWL & 1850' FSL of Section 1, Block 4, University Lands Survey, A-U37, Upton County, Texas

ELEVATION: 2663' GL, 2679' KB

RRC PERMIT: 701387 **API NO.:** 42-461-36943

9-11-10 Commenced moving in HiTex Drilling Rig 141.

9-12-10 Finished moving in rig. Commenced rig up operations. Heavy rain.

9-13-10 Finishing rig up. Prep to spud.

9-14-10 Spudded 17½" hole at 11 am 9-13-10. Drilled to 333' KB (13.5 hrs). Survey 1° @ 185'. Rig down 5 hrs for Rig 3PS repair.

9-15-10 WOC @ 532' KB. Drilled to 532' KB @ 5:30 pm 9-14-10. Survey 1.5° @ 500'. Circulated hole and POOH to run 13-3/8" casing. Ran casing to 527' and cemented. Plug down @ 6 am 9-15-10.

CASING RECORD:

Ran 13 jts 13-3/8" 48# H-40 STC casing with shoe & float collar & 3 centralizers every 4th jt to surface. Landed casing @ 527' KB. Cemented by Rising Star w/575 sx Class "C", 1% calcium chloride & 0.25% R-38. Circulated 80 sx cement to surface.

9-16-10 NU BOP & rotating head this am. WOC 4 hrs. Cut off & welded on casinghead. RU flowline.

9-17-10 Shut down for repairs to rig brake system this am. Fnsh NU BOP & tested to 1200 psi. Made up BHA & TIH to t/cement @ 3 pm 9-16-10. RR 15 hrs.

9-18-10 Rig repairs @ 978' this am. Tagged t/cement @ 480'. Drld cement & shoe. Drld new 11" hole to 978' in 8 hrs. SD @ 9:30 pm to replace 3rd brake assembly.

9-19-10 Drlg @ 2028', 1050' past 24 hrs. Bit #2 11" Caprock Cr616 1050'/18.5 hrs (1498'/26.5 hrs). Surveys 1° @ 1387', 1° @ 1637', 1° @ 1865'. MW 9.4#, visc 28, cl 140,000 ppm.

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- 9-20-10 Drlg @ 2883', 855' past 24 hrs. Bit #2 855'/23.5 hrs (2353'/50 hrs). Surveys 1° @ 2060', 1° @ 2346', 1° @ 2600'. MW 10.2#, visc 30, cl 140,000 ppm.
- 9-21-10 Drlg @ 3325', 442' past 24 hrs. Bit # 2 442'/19 hrs (2795'/69 hrs). Surveys 1° @ 3104'. MW 10.2, visc 31, cl 192,000. RR 4 hrs to change transducer on top drive.
- 9-22-10 Drlg @ 3960', 635' past 24 hrs. Bit #2 635'/23 hrs (3430'/92 hrs). Survey 1° @ 3549'. MW 10.2, visc 31, cl 192,000.
- 9-23-10 Drlg @ 4494', 534' past 24 hrs. Bit #2 534'/22 hrs (3964'/114 hrs). Survey 0.5° @ 4118'. MW 10.8, visc 36, cl 180,000.
- 9-24-10 Prep to fish 8 5/8" casing @ 4525' intermediate hole TD. Drld to 4525', 31'/2.5 hrs (3995'/116.5 hrs). TOOH to run 8 5/8" casing. RU casing crew. RIH w/6 jts 8 5/8" HCK-55 STC casing w/guide shoe and float collar, cross thread between jts 6 & 7, dropped 6 jts in hole. RD casing crew, wait on fisherman & fishing tools.
- 9-25-10 Running 8 5/8" casing this am. RIH w/fishing tools, stabbed into fish and POOH w/fish. Layed down 6 jts casing & fishing tools. Commenced running casing @ 1:30 am.
- 9-26-10 Currently testing BOP. Fnsh running casing, landed @ 4519'. Circ total 4hrs (waited on cementing head 2 hrs). RU cementers & cemented. Plug down @ 4 pm 9-25-10. Nippled down, set slips, cut off & NU "B" section of well head.

INTERMEDIATE CASING

Ran 13 jts (533.15') 8 5/8" 32# HCK-55 STC casing w/float shoe and float collar on top of 1st jt followed by 95 jts (3986.91') 8 5/8" 32 # Buttrass casing. Ran 10 centralizers on shoe jt & every other collar. Cemented w/515 sx Class "C", 10% gel, 2.5# Star Seal, 0.25% R-38, 3% salt followed by 355 sx Class "C", 1% calcium chloride, 0.25% R-38.

- 9-27-10 Working on rig. Fnsh testing BOP. Contractor layed derrick over & replaced four drive motor & brake assemblies. Raised derrick & aligned. Trouble shooting electrical problems on top drive.
- 9-28-10 Drlg @ 4842', 317' past 24 hrs. Bit #3 Cap Rock 7 7/8" 613SR in @ 4525' (317'/9hrs). MW 8.8#, visc 28, cl 6500. Worked on rig 5 hrs, TIH to drill cement 8.5 hrs, drill cement & shoe 1 hr, repair hydraulic line 0.5 hrs.

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9-29-10 Drlg @ 5472', 630' past 24 hrs. Bit #3 630'/21.5 hrs (947'/30.5 hrs). MW 8.6#, visc 29. Surveys 0.75° @ 4500', 1° @ 4900', 1° @ 5075'.

9-30-10 Drlg @ 6136', 664' past 24 hrs. Bit #3 664'/22 hrs (1611'/52.5 hrs). MW 8.5, visc 29, pH 7.5, cl 20,000. Surveys 1° @ 5442', 2° @ 5882', 1° @ 6040'.

10-1-10 Drlg @ 6804', 668' past 24 hrs. Bit # 3 668'/22 hrs (2279'/74.5 hrs). MW 8.5, visc 29, cl 15,000. Surveys 1° @ 6136', 1° @ 6390'.

10-2-10 Depth 7225', repairing 3PS sensor. Drilled 421' past 24 hrs. Bit #3 421'/14 hrs (2700'/88.5 hrs). MW 8.5, visc 29, pH 11, cl 15,000. Surveys 2° @ 6868', 2° @ 7020, 2° @ 7178'. Rig repair 8.5 hrs.

10-3-10 Drlg @ 7727', 502' past 24 hrs. Bit #3 502'/21.5 hrs (3202'/110 hrs). MW 8.5, visc 29, pH 10, cl 15,000. Surveys 1° @ 7281', 1° @ 7466'.

10-4-10 Drlg @ 7981', 254' past 24 hrs. Bit #3 254'/19.5 hrs (3456'/129.5 hrs). MW 8.5, visc 29, pH 11, cl 15,000. Survey 1° @ 7727', 1° @ 7850'. Repair rig wrench & replace battery in sensor 3.5 hrs.

10-5-10 On bottom w/Bit #4 @ 7987', prep to resume drilling. Bit #3 out @ 7987' (3462'/130 hrs). Bit #4 Halliburton QH37 in @ 7987'. Trip for bit 21.5 hrs, drld 0.5 hrs, circ & cond mud 1 hr, RR 0.5 hr, SR 0.5 hr.

10-6-10 Drlg @ 8394', 407' past 24 hrs. Bit #4 407'/21.5 hrs. MW 8.5, visc 29, pH 11, cl 15,000. Survey 1° @ 8183'. RR 1.5, survey 0.5, SR 0.5.

10-7-10 Drlg @ 8825', 432' past 24 hrs. Bit #4 432'/20 hrs (839'/41.5 hrs). MW 8.5, visc 28, pH 10, cl 13,300. Surveys 1° @ 8362', 1° @ 8617'. RR 2.5, SR 0.5, survey 1. Lost 150-200 bbl mud, pumped lcm sweeps, holding ok.

10-8-10 Drlg @ 9185', 360' past 24 hrs. Bit #4 360'/22.5 hrs (1198'/64 hrs). MW 8.7, visc 37 pH 10.5, WL 16, cl 9,000. Surveys 2° @ 8871', 1° @ 8995'. Mixed 141 FWG, 4 lm, 35 SA, 5 multi-seal, 15 gal M-55.

10-9-10 Tripping for Bit #5 @ 9316'. Drld 131' past 24 hrs. Bit #4 out @ 9316' (1329'/75 hrs). MW 8.7, visc 37, pH 10.5, WL 14, cl 8,500. Survey 1° @ 9190'. Mixed 15 FWG, 4 caustic, 5 SA. Drl 11, trip 6, RR 5.5, circ 0.5, SR 0.5, surv 0.5.

10-10-10 Drlg @ 9323', 7' past 24 hrs. Bit #5 Halliburton QH 45 in @ 9316' (7'/1.5 hrs). MW 8.8, visc 35, pH 9, WL 12, cl 8600. Mixed 3 FWG, 2 caustic. Trip 17, RR 4, SR 0.5, wash & ream 9153'-9316' 1.

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- 10-11-10 Drlg @ 9508', 185' past 24 hrs. Bit #5 185'/23 hrs. MW 8.6, visc 37, pH 10, WL 14.5, cl 8200. Mixed 90 FWG, 4 caustic, 2 SA, 1 pac-r. Survey 1° @ 9437'.
- 10-12-10 Drlg @ 9657', 149' past 24 hrs. Bit # 5 149'/ 23 hrs (341'/47.5 hrs). MW 8.9, visc 41, pH 9.5, WL 14, cl 7400. Mixed 20 FWG, 5 caustic, 1 pac-r.
- 10-13-10 Drlg @ 9794', 137' past 24 hrs. Bit #5 137'/22 hrs (478'/69.5 hrs). MW 8.9, visc 38, pH 10, WL 15, cl 6500. Survey 2° @ 9667'. Mixed 17 FWG, 4 caustic, 2 pac-r.
- 10-14-10 Drlg @ 9906', 112' past 24 hrs. Bit #5 112'/22.5 hrs (590'/92 hrs). MW 8.9, visc 39, pH 10, WL 16, cl 4800. Survey 1° @ 9794'. Mixed 91 FWG, 4 caustic, 1 pac-r.
- 10-15-10 TIH w/Bit #6. Bit #5 out @ 9915'(599'/94.5 hrs). Bit #6 Hughes GX-E38CH in @ 9915'. MW 9, visc 43, pH 10, WL 14, cl 4300. Mixed 12 FWG, 1 caustic, 1 pac-r. Trip 18.5, RR 1.5, circ 1.5, drlg 2.5.
- 10-16-10 Drlg @ 10015', 100' past 24 hrs. Bit #6 100'/14.5 hrs. MW 8.9, visc 39, pH 9, WL 15. Survey 1° @ 9913'. Mixed 41 FWG, 5 caustic, 1 SA, 3 pac-r. Trip 8, RR 1, survey 0.5, drlg 14.5.
- 10-17-10 TIH w/magnet to fish bit cone. Drld to 10021', 6'/3.5 hrs. Bit #6 106'/18 hrs. Bit quit drilling. POOH, found cone off bit, teeth gone on other cones, cracked. Found wash out between collars 3 & 4. Inspected drill collars on rack, removed one additional collar from string.
- 10-18-10 TOOH w/magnet. Fnsh TIH w/magnet to fish cone. Hit bridge @ 9900', washed to bottom. MW 9, visc 39, pH 9.5, WL 15.2, cl 4500. Drlg 0.5, trip 19, RR 4, fishing 0.5.
- 10-19-10 TIH w/new bit and junk basket. Fnsh POOH w/magnet. Recovered two pieces of cone, left one small piece of cone plus several bit buttons. Bit #7 Hughes VG-45CH in @ 10,021'. MW 9, visc 39, pH 9, WL 16, cl 4500. Trip 20.5, RS 0.5, RR 0.5, wait on junk basket 2.5.
- 10-20-10 Drlg @ 10172', 151' past 24 hrs. Bit #7 151'/13.5 hrs. MW 8.9, visc 45, pH 10.5, WL 15, cl 4500. Mixed 2 FWG, 4 caustic, 2 pac-r. Trip 7.5, ream & wash to bottom 1.5, RR 1, SR 0.5.
- 10-21-10 Prep to run Bit #8. Drld to 10292', 120'/12.5 hrs. TOH w/Bit #7 (271'/26 hrs). MW 8.9, visc 45, pH 10.5, WL 12.4, cl 4800. Mixed 2 FWG, 3 caustic, 5 pac-r. Trip 10.5, SR 0.5, circ spl 0.5.

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- 10-22-10 Drlg @ 10390', 98' past 24 hrs. Bit #8 Security QH-47 in 10292', 98'/10 hrs. MW 8.9, visc 45, pH 10.5, WL 15. Mixed 7 FWG, 3 caustic, 1 pac-r. Trip 12, WTB 0.5, survey (miss run) 1, SR 0.5.
- 10-23-10 Drlg @ 10,550', 160' past 24 hrs. Bit #8 160'/16.5 hrs (258'/26.5 hrs). MW 8.9, visc 42, pH 10.5, WL 13.2. Mixed 8 FWG, 4 caustic, 2 pac-r, 3 poly vis. Ream 4, short trip for survey 2, survey 1, SR 0.5.
- 10-24-10 TIH w/Bit #9, Security QH 45. Drld to 10613', 63'/6.5 hrs. Bit #8 out @ 10613', 321'/33 hrs. POOH to replace bit & Teledrift. MW 8.9, visc 40, pH 10.5, WL 11.6. Mixed 8 FWG, 2 caustic, 1 pac-r, 2 poly vis. Trip 14, circ spls 1.5, survey 0.5, SR 0.5.
- 10-25-10 Drlg @ 10717', 104' past 24 hrs. Bit #9, 104'/11.5 hrs. MW 8.9, visc 60, pH 10.5, WL 11.2, cl 4000. Surveys 2° @ 9913' (corrected), 6° @ 10295', 5° @ 10454', 5° @ 10550', 5° @ 10579', 5° @ 10668'. Mixed 33 FWG, 3 caustic, 4 pac-r. Trip 7, wash & ream 4, survey 0.5, RR 0.5, SR 0.5.
- 10-26-10 TIH w/Bit #10, Caprock 613. Drld to 10730', 13'/5 hrs (117'/16.5 hrs). TOOH to replace bit due to low penetration rate. MW 9, visc 44, pH 11, WL 11.2, cl 4000. Mixed 2 caustic, 3 cedar fiber, 1 pac-r. Trip 15.5, circ spls 0.5, RR 2.5, SR 0.5.
- 10-27-10 Drlg @ 10800', 70' past 24 hrs. Bit #10 70'/6 hrs. MW 8.8, visc 47, pH 11, WL 11.2, cl 4000. Mixed 26 FWG, 2 caustic, 1 SA, 5 pac-r. Trip 8.5, RR 6.5, ream 2.5, SR 0.5.
- 10-28-10 Drlg @ 11119', 319' past 24 hrs. Bit #10 319'/23 hrs (389'/29 hrs). MW 8.9, visc 42, pH 11, WL 7.6, cl 4000. Surveys 3° @ 10832', 3° @ 10960'. Mixed 25 FWG, 4 caustic, 2 SA, 7 pac-r.
- 10-29-10 Drlg @ 11223', 104' past 24 hrs. Bit #10 104'/20.5 hrs (493'/49.5 hrs). MW 9, visc 49, pH 10.5, WL 11.2, cl 3700. Survey 5° @ 11144'. Mixed 26 FWG, 4 caustic, 5 walnut hulls, 5 pac-r, 4 poly vis.
- 10-30-10 Depth 11257', 34' past 24 hrs. TOOH for bit. Bit #10 34'/13 hrs (527'/62.5 hrs). MW 9, visc 60, pH 10.5, WL 10.4, cl 3900. Mixed 8 FWG, 2 caustic, 6 walnut hulls, 2 pac-r, 2 poly visc.
- 10-31-10 TIH w/Bit #11, Halliburton QH-39. Trip 19.5, wash & ream 9864'-10594' 2.5, work stuck pipe 1, RR 0.5, SR 0.5.
- 11-1-10 Drlg @ 11423', 166' past 24 hrs. Bit #11 in @ 11257', 166'/18.5 hrs. MW 9, visc 70, pH 10.5, WL 7.6, cl 3900. Mixed 89 FWG, 2 caustic, 1 walnut hulls, 5 pac-r, 2 poly visc. Wash & ream 10594'-11257' 4, circ spls @ 11320' 1, SR 0.5.

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- 11-2-10 TD 11469'. Currently TOO H for logs. MW 9.1, visc 70, pH 9.5, WL 7.6, cl 3700. Survey 4 ° @ 11433'.
- 11-3-10 Fnsh TOO H for logs. Ran Schlumberger Array Induction, CNL-Density and Spectral Gamma Ray log to Log TD 11473'. TIH to set plugs. TOO H 4, log 9, evaluate logs 4.5, Prep to TIH 1, TIH 5.5.
- 11-4-10 Fnsh TIH to 10020'. RU Halliburton. Set cement plugs: 10000' 55 sxs, 9300' 55 sxs, 6500' 45 sxs, 4569' 65 sxs. RD Halliburton. TOH to 2500' @ report time. TIH 6, TOH setting cement plugs 12 hrs, RR 3 hrs, SR 0.5, RD cementers & TOH 2.5.
- 11-5-10 Fnsh TOH. Nippled down BOP. Capped well. Cleaned working pits. **Released drilling rig @ 4 pm 11-4-10. Final drilling report.**

**BYRD OPERATING COMPANY
COMPLETION REPORT
UNIVERSITY "1-4" NO. 1
UPTON COUNTY, TEXAS**

LOCATION: 1121' FWL & 1850' FSL of Section 1, Block 4, University Lands Survey, A-U37, Upton County, Texas

ELEVATION: 2663' GL, 2679' KB

RRC PERMIT: 701387 **API NO.:** 42-461-36943

11-6-10 HiTex Drilling Rig 141 rigging down and cleaning up rig diesel spill.

11-7-10 Continued rigging down rig.

11-8-10 Prep to move out drilling rig.

11-9-10 Moved out majority of rig.

11-10-10 Finished moving out rig.

11-11-10 Big D Environmental Services remediated rig diesel spill.

11-13-10 Set anchors. Moved in test tank.

11-14-10 WOCU.

11-15-10 WOCU.

11-16-10 MI Basic Energy Services unit. Too windy to rig up until noon. NU well head and BOP. RIH w/2-7/8" tubing work string. Tagged PBTD @ 4082' KB. SDON.

11-17-10 Circulated casing clean w/2% KCL water. POOH w/tubing. RU Schlumberger. Ran Gamma Ray-Variable Density Cement Bond Log to LTD 4091' KB. Perforated Grayburg zone 3898'-3913' 2 spf w/4 1/2" PowerJet Omega 4505 gun (31-0.43" dia holes). RD Schlumberger. RIH w/10 stds of tbg and shut well in overnight. SITP 0#, SICP 0# this am.

11-18-10 RIH w/tubing and packer. Attempted to set packer unsuccessfully. POOH & replaced packer. Set Arrowset 1X packer w/circulating sub @ 3928' and pressure tested cement plug to 400#, held ok. Unable to unset packer. Left packer in tension overnight.

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- 11-19-10 Worked packer free. Reset packer @ 3832'. Swabbed tubing dry in 5 runs. Made 3 swab runs with no measurable fluid entry. SION. FL 100' above SN this am.
- 11-20-10 No fluid entry after milking perfs w/swab. Shut well in. Waiting on acid equipment.
- 11-21-10 Checked fluid level 100' above SN. MIRU Rising Star Services. Broke down perfs with 3 bbls 7½% NEFE mud acid w/1360#. Acidized Grayburg formation with a total of 1500 gal 7½% NEFE mud acid w/48 7/8" bio-balls @ 2.1-3.1 BPM & MTP 1180#. Minimal ball action. ISIP 980#, 5 min SIP 940#, 10 min SIP 920#, 15 min SIP 910#. TLTR 100 bbls. Opened to flow after 1 hr w/SITP 900#. Flowed back 5 BLW and died. Swabbed 30 BLW to tank w/very little fluid entry after recovering volume in tubing and casing. SI. LTR 65 bbls.
- 11-22-10 Shut-in Sunday. SITP 0# this am. FL 2500' above SN on first swab run. Recovered acid water.
- 11-23-10 SITP 0# w/FL 700' above SN this am. Continued to swab yesterday with minimal fluid entry. Samples contained some formation fines with occasional sour odor in water samples. Recovered mostly spent acid water and KCL water. Load recovered yesterday 24 bbls. LTR 41 bbls.
- 11-24-10 RU Rising Star Services pumping equipment and Lariat Services nitrogen equipment. Pumped 2 bbl KCl water pad followed by 92 bbl KCL water with non-emulsifier & foaming agent additives plus 80,000 scf nitrogen (50% nitrogen/50% fluid mixture), followed by 9 bbl KCL water flush. Treating rate 1.9 BPM fluid plus 2.2 bbl nitrogen per minute @ MTP 1640#. Opened to flow on 36/64" choke. Recovered approximate tubing volume and died. RIH w/swab. No fluid in tubing. SITP 100# this am. Blew well down & RIH w/swab, tubing dry. No fluid entry overnight. Shut-in well @ 3 pm 11-24-10.
- 11-29-10 Shut-in 113 hrs. SITP 100# this am. FL 2500' ASN. No oil in sample.
- 11-30-10 Swabbed dry w/no fluid entry. Unset packer & POOH w/tubing & packer. RIH w/tubing, tagged PBTD. No fill. Commenced laying down rental work string. SDON.
- 12-1-10 Finished laying down work string. Moved rental equipment off location and shut-in well. Dropping report pending additional evaluation.