



## Partner - Drilling

Well Name: Fcu 7622

Date: 7/22/2016

Well Name Fcu 7622	API/UWI 4200347362	State/Province Texas	County Andrews
Permit Number 815361	Spud Date 7/22/2016 00:45	Ground/Corrected Ground Elevation (ft) 3,307.00	KB-Ground Distance (ft) 13.00

### Mud Properties

Dens (lb/gal)	Vis (s/qt)
9.40	31

### Rig Info

Rig
Basic, 37

### Rig Release Date

RR Date

### Survey Information

Date	Description	EW Tie In (ft)	NS Tie In (ft)	Azimuth Tie In (°)	Inclination Tie In (°)	MD Tie In (ftKB)	TVD Tie In (ftKB)
7/22/2016	MWD	0.00	0.00	0.0	0.0	0.00	0.00
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)
256.00	1.70	0.00	255.96	3.80	0.00	3.80	0.66
529.00	0.80	0.00	528.89	9.75	0.00	9.75	0.33
1,031.00	0.70	0.00	1,030.85	16.32	0.00	16.32	0.02
1,531.00	0.90	0.00	1,530.80	23.31	0.00	23.31	0.04
1,690.00	0.50	0.00	1,689.79	25.25	0.00	25.25	0.25

### Daily Summary

Footage (ftKB)	End Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
829.00	1,713.0	34,438.30	131,109.53

Activity  
Cementing Surface Casing

### 24hr Activity

Com
Rot Drlg f/ 884' - 1,565', 681', avg rop 209 fph, 25 - 30 K wob, 105 - 120 rpm, 491 gpm, 1,257 psi SPP. (Both pumps on line f/948'-1,483', spm: 85 aside, gpm: 696, spp: 2,220).
Repair Rotary Chain & Test.
TOH for repairs on Rotary Drive Clutch.
Mechanic on site to replace rotary drive clutch.
TIH to Bottom.
Rot Drlg f/ 1,565' - 1,713', 180', avg rop 74 fph, 25 - 30 K wob, 100 rpm, 491 gpm, 1,370 psi SPP.
Pump 60 bbls high vis sweep & circulate wellbore clean.
Held PJSM. TOOH racking back 4-1/2" DP & 6-1/4" DC's in derrick.
L/D 11" Ulterra PDC Bit, Bit Sub w/ Solid float, Surefire Inclination tool, IBS & 3x 8" DC.
Held PJSM, Rig up Thompson Csg Crew and Lay Down Machine.
Run 8-5/8" Surface Csg. as follows: 1 - 8 5/8" Guide Shoe ( 0.84' ), 1 - joint 8 5/8" 24 lb/ft J-55 STC ( 44.02' ), 1 - 8 5/8" Float Collar ( 1.40' ), 38 - joints 8 5/8" 24 lb/ft J-55 STC ( 1,670.19' ), Ran a total of 39 joints 1,716.45' . Top of Guide Shoe @ 1,712' & Top of FC @ 1,667', Dressed w/ Summit Float Equipment & Centralizers, Thread Locked GS, SJ, FC, & 2nd joint , Torque Casing to Opt 2,440 ft/lb, Place 11 Centralizers as per Program. Wash joints 21, 26, 38, 39 to bottom.
Circulate wellbore @ 409 gpm w/ 294 psi SPP. While circulating R/D Thompson Casing running eqpt, Laydown Machine & Held PJSM with Halliburton on cementing ops.
R/U Halliburton Cement Equipment, Cement 8 5/8" Casing as follows, Test Lines to 2,500 psig. Pump 40 bbl/FW Spacer Ahead of 385 sxs Lead Econocem HLC Cement Mixed @ (Density 12.50 ppg, Yield 2.083 cu.ft/sk, Water 11.59 gal/sk Total 143 bbls/slurry), Pumped @ 5 bbl/min, 40 bbls in w/ Lead Cement @ 50-110 psig.



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Mud Properties	
Dens (lb/gal)	Vis (s/qt)

Rig Info
Rig
Basic, 37

Rig Release Date
RR Date

Survey Information							
Date 7/22/2016	Description MWD	EW Tie In (ft) 0.00	NS Tie In (ft) 0.00	Azimuth Tie In (°) 0.0	Inclination Tie In (°) 0.0	MD Tie In (ftKB) 0.00	TVD Tie In (ftKB) 0.00
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)
256.00	1.70	0.00	255.96	3.80	0.00	3.80	0.66
529.00	0.80	0.00	528.89	9.75	0.00	9.75	0.33
1,031.00	0.70	0.00	1,030.85	16.32	0.00	16.32	0.02

Daily Summary			
Footage (ftKB) 829.00	End Depth (ftKB) 1,713.0	Daily Field Est Total (Cost) 28,206.47	Cum Field Est To Date (Cost) 120,827.70

Activity

**24hr Activity**

Com

Rot Drilg f/ 884' - 1,713', 829', avg rop xxxx fph, 15 - 35 K wob, 115 rpm, 491 gpm, xxxx psi SPP.

Pump 60 bbls high vis sweep & circulate wellbore clean.

Held PJSM. TOOH racking back 4-1/2" DP & 6-1/4" DC's in derrick.

L/D 11" Ulterra PDC Bit, Bit Sub w/ Solid float, Surefire Inclination tool, IBS & 3x 8" DC.

Held PJSM, Rig up Thompson Csg Crew and Lay Down Machine.

Run 8-5/8" Surface Csg. as follows: 1 - 8 5/8" Guide Shoe ( 0.84' ), 1 - joint 8 5/8" 24 lb/ft J-55 STC ( 44.02' ), 1 - 8 5/8" Float Collar ( 1.40' ), 38 - joints 8 5/8" 24 lb/ft J-55 STC ( 1,670.19' ), Ran a total of 39 joints 1,716.45' . Top of Guide Shoe @ 1,712' & Top of FC @ 1,667', Dressed w/ Summit Float Equipment & Centralizers, Thread Locked GS, SJ, FC, & 2nd joint , Torque Casing to Opt 2,440 ft/lb, Place 11 Centralizers as per Program. Wash joints xxx, xxx, xxx, xxx to bottom.

Circulate wellbore @ 450 gpm w/ 174 psi SPP. While circulating R/D Thompsons Casing running eqpt, Laydown Machine & Held PJSM with Halliburton on cementing ops.

R/U Halliburton Cement Equipment, Cement 8 5/8" Casing as follows, Test Lines to 3,000 psig. Pump 20 bbl/FW Spacer Ahead of 385 sxs Lead Econocem HLC Cement Mixed @ (Density 12.50 ppg, Yield 2.083 cu.ft/sk, Water 11.59 gal/sk Total 143 bbls/slurry), Pumped @ 5 bbl/min, w/ 50-110 psig, Followed by 310 sxs Tail Halcem Class "C" Cement Mixed @ ( Density 14.80 ppg, Yield 1.341 cu.ft/sk, Water 6.41 gal/sk, Total 74 bbls/slurry), Pumped @ 5 bbl/min, w/ 130 psig, Release Plug & Displace with 106 bbls of 8.3 ppg FW @ 5 bbls/min. Bump Plug w/ 750 psig. Pressure up to 1,251 psig @ XXXX hrs 7/22/2016, Held Pressure for 5 min. Release Pressure Bleed Back 1 bbl. Float Held, Circulated XX bbls (XXX sx) of Cement to Surface, RD Halliburton Equipment.

Held PJSM. Cut Conductor & 8 5/8" Casing, Weld on 11"3M x 8 5/8" SOW GE Casing Head. Test to 1000 psig / 5 min ( Test ok ).

Held PJSM. N/U Shaffer 11" 5M Double Ram BOP, Annular, Rotating Head & 3 1/8" 5M x 2 1/16"5M Choke Manifold, Kill Lines & Flowline. Function test BOP.

Pump through BOP & Choke Manifold, Test w/ Rig Pump, Test Blind Rams, 4" Manual Valve, Upper Kelly Valve & Choke Manifold 250 psig low & 1,500 psig high. Test each for 5 minutes. ( Test ok )



## Partner - Drilling

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Permit Number 815361	Spud Date 7/22/2016 00:45	Ground/Corrected Ground Elevation (ft) 3,307.00	KB-Ground Distance (ft) 13.00

### Mud Properties

Dens (lb/gal)	Vis (s/qt)
10.00	29

### Rig Info

Rig
Basic, 37

### Rig Release Date

RR Date

### Survey Information

Date	Description	EW Tie In (ft)	NS Tie In (ft)	Azimuth Tie In (°)	Inclination Tie In (°)	MD Tie In (ftKB)	TVD Tie In (ftKB)
7/22/2016	MWD	0.00	0.00	0.0	0.0	0.00	0.00
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)
1,904.00	0.20	0.00	1,903.79	26.55	0.00	26.55	0.14
2,063.00	0.40	0.00	2,062.78	27.39	0.00	27.39	0.13
2,253.00	0.60	0.00	2,252.78	29.05	0.00	29.05	0.11
2,443.00	1.20	0.00	2,442.75	32.03	0.00	32.03	0.32
2,633.00	1.10	0.00	2,632.71	35.84	0.00	35.84	0.05

### Daily Summary

Footage (ftKB)	End Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
1,047.00	2,760.0	25,733.84	157,043.37

Activity  
Drilling Production Hole @ 2,760'

### 24hr Activity

Com
R/U Halliburton Cement Equipment, Cement 8 5/8" Casing as follows, Test Lines to 3,000 psig. Pump 20 bbl/FW Spacer Ahead of 385 sxs Lead Econocem HLC Cement Mixed @ (Density 12.50 ppg, Yield 2.083 cu.ft/sk, Water 11.59 gal/sk Total 143 bbls/slurry), Pumped @ 6 bbl/min, w/ 50-120 psig, Followed by 310 sxs Tail Halcem Class "C" Cement Mixed @ ( Density 14.80 ppg, Yield 1.341 cu.ft/sk, Water 6.41 gal/sk, Total 74 bbls/slurry), Pumped @ 6 bbl/min, w/ 319 psig, Release Plug & Displace with 106 bbls of 8.3 ppg FW @ 6 bbls/min. Bump Plug w/ 700 psig. Pressure up to 1,310 psig @ 06:23 hrs 7/23/2016, Held Pressure for 5 min. Release Pressure Bleed Back 1 bbl. Float Held, Circulated 30 bbls (81 sx) of Cement to Surface, RD Halliburton Equipment.
Held PJSM. Cut Conductor & 8 5/8" Casing, Weld on 11"3M x 8 5/8" SOW GE Casing Head. Test to 1000 psig / 5 min ( Test ok ).
Held PJSM. N/U Shaffer 11" 5M Double Ram BOP, Annular, Rotating Head & 3 1/8" 5M x 2 1/16"5M Choke Manifold, Kill Lines & Flowline. Function test BOP.
Pump through BOP & Choke Manifold, Test w/ Rig Pump, Test Blind Rams, 4" Manual Valve, Upper Kelly Valve & Choke Manifold 250 psig low & 1,500 psig high. Fix leaks, Test each for 5 minutes. ( Test ok ).
Test 8 5/8" Surface Casing to 1,000 psig for 30 minutes per TRRC. (Test ok)
Pick up NOV Motor, Surefire Survey Tool & 2 IBS.
Trip in Hole w/ Bit #2 CapRock CR616SR(K).
Install Rotating Head & Displace hole to 10 ppg Brine.
Test Pipe Rams & Annular @ 250 psig low & 1,500 psig high ( Test ok ). Test Accumulator (Surface BOP System Field Drawdown Test.)
Drilg Plug, FC & 44' of Cement. WOB: 5 - 15, rpm: 55, motor 114 rpm, spp: 1,634 psi. 450 gpm. Tagged cemenet @ 1,661'.
Rot Drilg f/ 1,713' - 2,760', 1,047', avg rop 102 fph, 10 - 15 K wob, Rotary 75 rpm, Motor 137 rpm, Total rpm 212. spp: 2,182 psi.



## Partner - Drilling

Well Name: Fcu 7622

Date: 7/24/2016

Well Name Fcu 7622	API/UWI 4200347362	State/Province Texas	County Andrews
Permit Number 815361	Spud Date 7/22/2016 00:45	Ground/Corrected Ground Elevation (ft) 3,307.00	KB-Ground Distance (ft) 13.00

### Mud Properties

Dens (lb/gal)	Vis (s/qt)
10.00	29

### Rig Info

Rig
Basic, 37

### Rig Release Date

RR Date

### Survey Information

Date	Description	EW Tie In (ft)	NS Tie In (ft)	Azimuth Tie In (°)	Inclination Tie In (°)	MD Tie In (ftKB)	TVD Tie In (ftKB)
7/22/2016	MWD	0.00	0.00	0.0	0.0	0.00	0.00
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)
3,579.00	1.40	0.00	3,578.50	56.15	0.00	56.15	0.11
3,769.00	1.20	0.00	3,768.45	60.46	0.00	60.46	0.11
3,957.00	1.00	0.00	3,956.41	64.07	0.00	64.07	0.11
4,147.00	0.60	0.00	4,146.39	66.72	0.00	66.72	0.21
4,337.00	0.50	0.00	4,336.38	68.55	0.00	68.55	0.05

### Daily Summary

Footage (ftKB)	End Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
1,767.00	4,527.0	28,839.90	185,883.27

Activity  
Drilling Production Hole @ 4,527'

### 24hr Activity

Com
Rot Drlg f/ 2,760' - 3,455', 695', avg rop 77 fph, 10 - 18 K wob, Rotary 70 - 75 rpm, Motor 126 rpm, Total rpm 201. spp: 2,210 psi. Lubricate Rig. Rot Drlg f/ 3,455' - 3,833', 378', avg rop 88 fph, 15 - 18 K wob, Rotary 75 rpm, Motor 131 rpm, Total rpm 206. spp: 2,227 psi. Change out swivel packing. Rot Drlg f/ 3,455' - 4,527', 1,072', avg rop 119 fph, 20 - 25 K wob, Rotary 70 - 75 rpm, Motor 120 rpm, Total rpm 195. spp: 2,270 psi.



## Partner - Drilling

Well Name: Fcu 7622

Date: 7/25/2016

Well Name Fcu 7622	API/UWI 4200347362	State/Province Texas	County Andrews
Permit Number 815361	Spud Date 7/22/2016 00:45	Ground/Corrected Ground Elevation (ft) 3,307.00	KB-Ground Distance (ft) 13.00

### Mud Properties

Dens (lb/gal)	Vis (s/qt)
10.20	29

### Rig Info

Rig
Basic, 37

### Rig Release Date

RR Date

### Survey Information

Date	Description	EW Tie In (ft)	NS Tie In (ft)	Azimuth Tie In (°)	Inclination Tie In (°)	MD Tie In (ftKB)	TVD Tie In (ftKB)
7/22/2016	MWD	0.00	0.00	0.0	0.0	0.00	0.00
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)
4,337.00	0.50	0.00	4,336.38	68.55	0.00	68.55	0.05
4,811.00	0.40	0.00	4,810.37	72.27	0.00	72.27	0.02
5,285.00	0.30	0.00	5,284.36	75.16	0.00	75.16	0.02
5,758.00	0.40	0.00	5,757.35	78.05	0.00	78.05	0.02
6,232.00	0.40	0.00	6,231.34	81.36	0.00	81.36	0.00

### Daily Summary

Footage (ftKB)	End Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
2,022.00	6,549.0	15,506.00	188,165.43

Activity  
Drilling Production Hole @ 6,549'

### 24hr Activity

Com
Rot Drlg f/ 4,527' - 5,570', 1,043', avg rop 115 fph, 28 - 30 K wob, Rotary 65 - 75 rpm, Motor 114 rpm, Total rpm 189. spp: 2,174 psi. Lubricate Rig. Change out rotating head rubber. Rot Drlg f/ 5,570' - 6,549', 979', avg rop 69 fph, 28 - 35 K wob, Rotary 65 - 75 rpm, Motor 114 rpm, Total rpm 189. spp: 2,259 psi.



## Partner - Drilling

Well Name: Fcu 7622

Date: 7/26/2016

Well Name Fcu 7622	API/UWI 4200347362	State/Province Texas	County Andrews
Permit Number 815361	Spud Date 7/22/2016 00:45	Ground/Corrected Ground Elevation (ft) 3,307.00	KB-Ground Distance (ft) 13.00

### Mud Properties

Dens (lb/gal)	Vis (s/qt)
10.20	30

### Rig Info

Rig
Basic, 37

### Rig Release Date

RR Date

### Survey Information

Date	Description	EW Tie In (ft)	NS Tie In (ft)	Azimuth Tie In (°)	Inclination Tie In (°)	MD Tie In (ftKB)	TVD Tie In (ftKB)
7/22/2016	MWD	0.00	0.00	0.0	0.0	0.00	0.00
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)
5,285.00	0.30	0.00	5,284.36	75.16	0.00	75.16	0.02
5,758.00	0.40	0.00	5,757.35	78.05	0.00	78.05	0.02
6,232.00	0.40	0.00	6,231.34	81.36	0.00	81.36	0.00
6,769.00	0.20	0.00	6,768.33	84.17	0.00	84.17	0.04
7,338.00	0.40	0.00	7,337.32	87.15	0.00	87.15	0.04

### Daily Summary

Footage (ftKB)	End Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
812.00	7,361.0	14,708.96	202,874.39

Activity  
R/D Halliburton Logging Unit.

### 24hr Activity

Com
Rot Drlg f/ 6,549' - 6,739', 190', avg rop 70 fph, 30 - 35 K wob, Rotary 65 rpm, Motor 114 rpm, Total rpm 179. spp: 2,257 psi. Lubricate Rig. Rot Drlg f/ 6,739' - 7,361', 622', avg rop 69 fph, 35 K wob, Rotary 55 - 65 rpm, Motor 105 rpm, Total rpm 170. spp: 2,199 psi. Pump 60 bbl high vis sweep & Circulate hole clean. While circulating held PJSM on laydown operations & R/U of Thompson Lay Down Machine. Flow check --- well static. POOH from 7,361' to 667', L/D 211 jts of 4-1/2" DP. Lay Down BHA from 667' to Surface L/D 7-7/8" BHA. Break & Lay Down Kelly. Held PJSM, R/U Halliburton Logging Unit, Logged in hole w/ Spectral Density, Dual Laterolog Microguard, Dual Spaced Neutron, Gamma Ray. 8 5/8" Csg Shoe located @ 1,713' WLM. Wireline tag at 2,300' WLM. Unable to work assembly down, attempted 8 times no penetration. Confirmed with Geologist to call logs off. POOH and R/D Halliburton Logging Unit.