



**LIME ROCK  
RESOURCES**

## Daily Drilling Report

Well Name: **UL 13 JAFFREY 4414H**

Report #: **4.0, DFS: 0.00**

Acquisition: **Shafter Lake**

API/UWI 42-003-47570	Surface Legal Location SURVEY- UL; BLOCK-13; SECTION-14	License #	State/Province Texas
Spud Date	Rig Release Date	KB-Ground Distance (ft) 21.00	KB-Casing Flange Distance (ft)

### Daily Operations

Report Start Date 9/29/2017	Weather Drizzle / Mist	Temperature (°F)	Road Condition Muddy	Hole Condition
--------------------------------	---------------------------	------------------	-------------------------	----------------

Operations 24 Hour Summary  
FINISH R/U, MECHANIC WORKED ON TOP DRIVE ENGINE, REPLACED O-RINGS@FUEL INJECTOR PUMP, MOTOR OIL WAS CONTAMINATED WITH FUEL, CHANGED OIL & FILTERS

Operations Next Report Period  
P/U BHA, BEGIN DRLG 12-1/4" SURF HOLE

Remarks  
CONTACTED RRC JOB # 101769

### Time Log of Operations

Start Time	Dur (hr)	Cum Dur (hr)	End Time	Code 1	Code 2	Com
06:00	2.00	2.00	08:00	Waiting on	Other	WAIT ON DAYLIGHT, PREPARE DERICK TO RAISE
08:00	14.00	16.00	22:00	Move In Rig Up	.	CONT R/U. RAISE DERICK (0830), RAISE SUB (1000), INSTALL STAIRS, R/U FLOOR, R/U RAILS, TOP DRIVE, ST -80, FLOW LINE, FILL PITS. READY TO SPUD
22:00	8.00	24.00	06:00	Downtime	Engines	MECHANIC WORKED ON TOP DRIVE ENGINE, REPLACED O-RINGS@FUEL INJECTOR PUMP, MOTOR OIL WAS CONTAMINATED WITH FUEL, CHANGED OIL & FILTERS

### Mud Volumes

Active Volume (bbl)	Var Active Vol (bbl)	Balance (bbl)	Tank Volume (bbl)	Additions (bbl)	Losses (bbl)	Hole Volume (bbl)
---------------------	----------------------	---------------	-------------------	-----------------	--------------	-------------------

Tank/Addition/Loss	Type	Volume (bbl)	Subtype

### Drill Strings

BHA #<stringno>, <des>

Bit Run	Drill Bit	IADC Bit Dull	TFA (incl Noz) (in²)
---------	-----------	---------------	----------------------

Nozzles (1/32")	String Length (ft)	String Wt (1000lbf)	BHA ROP (ft/hr)
-----------------	--------------------	---------------------	-----------------

### Drill String Components

Item Des	Jts	OD (in)	ID (in)	Len (ft)	Top Thread

### Drilling Parameters

Wellbore	Start Depth (ftKB)	End Depth (ftKB)	Cum Depth (ft)	Drilling Time (hr)	Cum Drill Time (hr)	Interval ROP (ft/hr)	Flow Rate (gpm)
WOB (1000lbf)	RPM (rpm)	SPP (psi)	Drill Str Wt (1000...)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drilling Torque	Off Btm Tq
Q Gas Inj (ft³/min)	T Inj (°F)	P BH Ann (psi)	T BH (°F)	P Surf Annulus (...)	T Surf Annulus (°F)	Q Liq Return (gpm)	Q Gas Return (f...

### Hydraulic Calculations

Bit Hydraulic Power (hp)	HP/Area (hp/in²)	Bit Jet Velocity (ft/s)	Bit Pressure Drop (psi)	% P @ bit (%)
Max Casing AV (ft/min)	Max Open Hole AV (ft/min)	Min Casing AV (ft/min)	Min Open Hole AV (ft/min)	ECD End (lb/gal)
Error				

--	--	--	--	--

--	--	--	--	--

Kick Date	Kick Depth (ftKB)	Control Date	Control Depth (ftKB)	Kick Class
-----------	-------------------	--------------	----------------------	------------

Kill Notes				
------------	--	--	--	--

### Lost Circulation

Start Date	Top (ftKB)	Btm (ftKB)	Ops In Prog	Vol Lost Tot (bbl)	End Date

--	--	--	--	--	--

### Interval Problems

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

Comment						
---------	--	--	--	--	--	--

--	--	--	--	--	--	--

Job Category Drilling	Sum of Total Fld Est (C...
	220,499.00

<b>Total (Sum)</b>	<b>Sum of Total Fld Est (C...</b>
	<b>220,499.00</b>

AFE Number D17083	AFE+Supp Amt (Cost)
----------------------	---------------------

Day Total (Cost) 23,159.00	Cum To Date (Cost) 220,499.00
-------------------------------	----------------------------------

Mud Field Est (Cost)	Cum Mud Field Est (Co...
----------------------	--------------------------

Start Depth (ftKB) 0.0	End Depth (ftKB) 0.0
---------------------------	-------------------------

Depth Progress (ft)	Avg ROP (ft/hr)
---------------------	-----------------

Target Formation	Target Depth (ftKB) 9,873.0
------------------	--------------------------------

Last Casing String Conductor, 90.0ftKB	
---	--

### Daily Contacts

Job Contact	Mobile
PRESTON ELLIS, ENGINEER	281-638-7731
JOSHUA STEPHENS, CONSULTANT	817-262-8785
ADAM VILLA, RIG MANAGER	325-450-8810
ADAM GARZA, CONSULTANT	806-786-3022

### Mud Checks

Date 9/30/2017		Type Water Base
Depth (ftKB) 90.0	Density (lb/gal) 8.34	Wellbore Original Hole
H2O (%)	Percent Oil (%)	Electric Stab (V)
Vis (s/qt) 28	PV OR (cP)	YP OR (lb/10...
Gel (10s) (lb/ft...	Gel (10m) (lb/ft...	Gel (30m) (lb/ft...

Solids (%)	Chlorides (mg/L)
------------	------------------

Filtrate (mL/30min)	Filter Cake (1/32")
---------------------	---------------------

### Rigs

#### SENDERO DRILLING COMPANY, 9

Contractor SENDERO DRILLING COMPANY	Rig Number 9
--	-----------------

Rig Supervisor ADAM VILLA, RIG MANAGER	Phone Mobile 325-450-8810
---	------------------------------

Rig Start Date 9/26/2017	Rig Release Date
-----------------------------	------------------

Rig Rate (ref) (Cost/day) 14,000.00	
--	--

#### 1, Continental-Emsco, F-1600

Pump # 1	Pwr (hp) 1,600.0	Rod Dia (in) 6
-------------	---------------------	-------------------

Liner Size (in)	Stroke (in)	Vol/Stk OR (b...
-----------------	-------------	------------------

P (psi)	Slow Spd	Strokes (s...)	Eff (%)
---------	----------	----------------	---------

#### 2, Continental-Emsco, F-1600

Pump # 2	Pwr (hp) 1,600.0	Rod Dia (in) 6
-------------	---------------------	-------------------

Liner Size (in)	Stroke (in)	Vol/Stk OR (b...
-----------------	-------------	------------------

P (psi)	Slow Spd	Strokes (s...)	Eff (%)
---------	----------	----------------	---------

--	--	--	--



# Daily Drilling Report

Well Name: UL 13 JAFFREY 4414H

Report #: 4.0, DFS: 0.00

Acquisition: Shafter Lake

## Interval Lessons

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

Comment

## Safety Incidents

Time	Category	Type	Subtype	Cause	Lost time?	Severity
------	----------	------	---------	-------	------------	----------

## Daily Costs

Cost Des	Vendor	Code 1	Code 2	Field Est (Cost)
Contract Drlg- Daywork	SANDERA DRILLING CO.	322	125	14,000.00
Supervision - Contract	OCTANE ENERGY	322	212	3,200.00
Office, Sewage and Misc Rentals:	PEAK OILFIELD SERVICES	380	155	700.00
Trucking & Hauling and Cranes	ACME BROKERAGE	380	201	1,050.00
Trucking & Hauling and Cranes	PRADON CONSTRUCTION & TRUCKING	380	201	605.00
Water Transfer / Frac Pit	DAVILLA'S TRUCKING	380	135	1,300.00
Tubular Testing, Inspection	CHARLIES FIELD SERVICE, INC	380	253	1,404.00
Welding	CJ Welding, LLC	950	103	900.00
Directional Tools & Services, Inspect, Repairs, & Replace	TERRA DIRECTIONAL SERVICES	380	152	

## Cement

<des>, <cementtyp>, <dtmstart>

Type	Cementing Start Date	Cementing End Date	Wellbore	String Table
------	----------------------	--------------------	----------	--------------

Cementing Company	Evaluation Method	Cement Evaluation Results
-------------------	-------------------	---------------------------

Comment

## Cement Stages

Stg #	Description	Objective			Comment		
Top Depth (ftKB)		Bottom Depth (ftKB)		Full Return?	Top Plug?	Bottom Plug?	Cement Volume Return (bbl)
Plug Bump Pressure (psi)		Recip?	Pipe Rotated?	Tagged Depth (ftKB)		Depth Plug Drilled Out To (ft...	Drill Out Date

## Cement Fluids

Fluid Type	Fluid Description	Amount (sacks)	Class	Volume Pumped (bbl)
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft <sup>3</sup> /sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal)	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

## Cement Fluid Additives

Additive	Type	Amount	Amount Units	Concentration	Conc Unit label
----------	------	--------	--------------	---------------	-----------------

## Safety JSA's

Time	Type	Des
18:00	Safety Meeting	PRE-TOUR

## Wellbores

Wellbore Name
Original Hole

## Wellbore Sections

Section Des	Size (in)	Act Top (ftKB)
Conductor	24	0.0
Act Btm (ftKB)	Start Date	End Date
90.0	9/25/2017	9/25/2017

## Kick Offs & Key Depths

Type	Top Depth (ftKB)
------	------------------

## Plug Back Total Depths

Date	Type
Depth (ftKB)	Depth (TVD) (ftKB)

Comment