Hilcorp Energy Company

Current Schematic

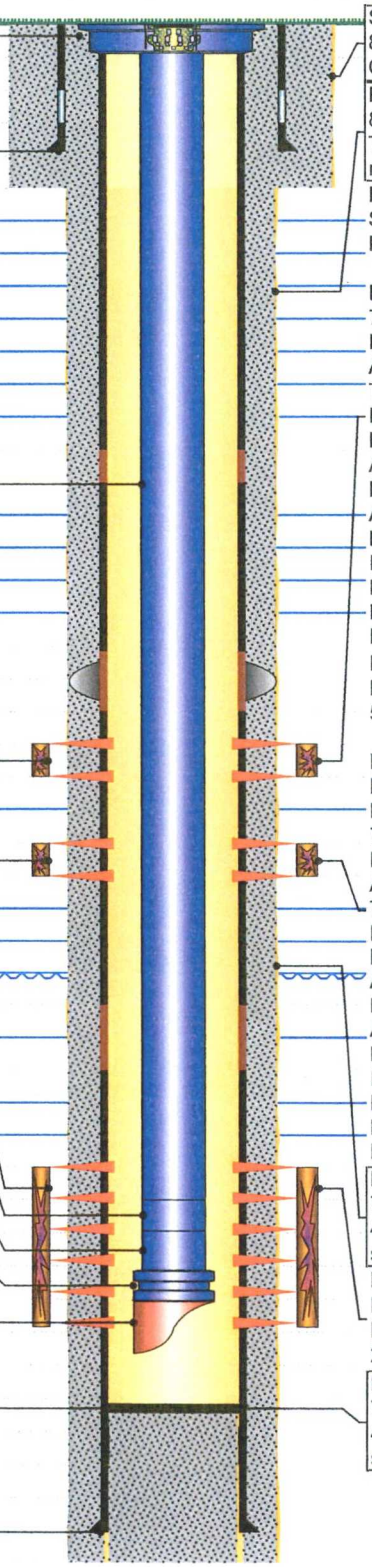
Well Name: FEDERAL B #2

API / UWI	Surface Legal Location	Field Name	Route	State/Province	Well Configuration Type
3004532860	T30N-R11W-S28	Basin Dakota	0701	New Mexico	Vertical

Ground Elevation (ft)	Original KB/RT Elevation (ft)	KB-Ground Distance (ft)	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)
6,076.00	6,088.00	12.00		

Vertical, Original Hole, 2/4/2019 1:03:21 PM

MD (ftKB)	TVD (ftKB)	Vertical schematic (actual)
12.1		Tubing Hanger; 7 1/16 in; 12.00 ftKB; 13.00 ftKB
13.1		
319.9		
365.2		
366.1		1; Surface; 8 5/8 in; 8.10 in; 12.00 ftKB; 366.00 ftKB
370.1		
958.0		OJO ALAMO (final)
1,200.1		FARMINGTON (final)
2,069.9		FRUITLAND (final)
2,394.0		PICTURED CLIFFS (final)
2,545.9		LEWIS (final)
3,212.9		HUERFANITO BENTONITE (final)
3,356.0		CHACRA (final)
3,444.2		
3,462.3		Tubing; 2 3/8 in; 4.70 lb/ft; J-55; 13.00 ftKB; 6,955.70 ftKB
3,962.9		(MV LEGAL TOP) (final)
3,980.0		UPPER CLIFF HOUSE (final)
4,082.0		CLIFFHOUSE (final)
4,148.9		MENEFEE (final)
4,243.8		
4,244.1		DV Tool @ 4244'
4,245.7		
4,423.9		PERF - MENEFEE; 4,424.00-4,682.00; 1/29/2019
4,682.1		
4,729.0		POINT LOOKOUT (final)
4,737.9		PERF - POINT LOOKOUT; 4,738.00-5,000.00; 1/28/2019
5,000.0		
5,100.1		MANCOS (final)
5,229.0		(MV LEGAL BASE) (final)
5,972.1		GALLUP (final)
6,709.3		
6,711.9		GREENHORN (final)
6,723.1		
6,770.0		GRAN PERF - DAKOTA; 6,852.00-6,992.00; 1/24/2006
6,836.0		DAKO
6,852.0		PUP JOINT; 2 3/8 in; 4.70 lb/ft; J-55; 6,955.70 ftKB; 6,957.60 ftKB
6,955.7		Tubing; 2 3/8 in; 4.70 lb/ft; J-55; 6,957.60 ftKB; 6,990.60 ftKB
6,957.7		
6,990.5		Nipple; 3 1/16 in; 4.70 lb/ft; J-55; 6,990.60 ftKB; 6,991.49 ftKB
6,991.5		
6,992.1		Expendasble Check; 3 1/16 in; 4.70 lb/ft; J-55; 6,991.49 ftKB; 6,992.34 ftKB
6,992.5		
7,297.9		PBTD; 7,298.00
7,298.2		
7,298.9		
7,339.9		
7,340.9		2; Production; 5 1/2 in; 4.89 in; 12.00 ftKB; 7,341.00 ftKB
7,342.8		



Surface Casing Cement; 12.00-370.00; 8/17/2005; Cemented w/ 250 sx Class B. Circ 21 bbls to surface.

Production Casing Cement; 12.00-4,244.00; 8/29/2005; Cemented 2nd stage: 650 sx Type III cmt, followed by 100 sx Type III neat cmt. Circ 100 bbls cmt.

Hydraulic Frac; 1/29/2019; MENEFEE STIMULATION: (4,244' TO 4,682') SICP - 0 PSI.

FRAC ZONE WITH 126,537 GALLONS OF 70 Q #20 GEL FOAM AT 50 BPM.
PROPPANT: 150,913 LBS. OF 20/40 ARIZONA SAND.
TOTAL N2: 1,55,569 SCF.
FLUSH: 105 FLUID BBLS.
MIN RATE: 7 BPM. MAX. RATE: 48 BPM.
AVG. RATE: 31 BPM.
MIN. PSI: 1,140 PSI. MAX. PSI: 3,722 PSI.
AVG. PSI: 2,849 PSI.
MAX. SAND CONC: 2.5 PSA DOWNHOLE.
ISDP: 1140 PSI. FRAC GRADIENT: .68 PSI/FT. (BASED OFF ISDP)
FLUID TO RECOVER: 1,058 CLEAN BBLS.
PUMPED 1,156 SLURRY BBLS.

Hydraulic Frac; 1/29/2019; POINT LOOKOUT STIMULATION: (4,738' TO 5,000') SICP - 0 PSI.

ESTABLISH ISDP: 650 PSI.
FRAC GRADIENT: .6 PSI/FT.
FRAC ZONE WITH 115,044 GALLONS OF 70 Q #20 GEL FOAM AT 50 BPM.
PROPPANT: 150,967 LBS. OF 20/40 ARIZONA SAND.
TOTAL N2: 1,214,264 SCF.
FLUSH: 132 FLUID BBLS.
MIN RATE: 49 BPM. MAX. RATE: 51 BPM.
AVG. RATE: 50 BPM.
MIN. PSI: 1,230 PSI. MAX. PSI: 2,930 PSI.
AVG. PSI: 2,438 PSI.
MAX. SAND CONC: 2.5 PSA DOWNHOLE.
ISDP: 650 PSI. FRAC GRADIENT: .6 PSI/FT. (BASED OFF ISDP)
FLUID TO RECOVER: 904 CLEAN BBLS.
PUMPED 1,083 SLURRY BBLS.

Production Casing Cement; 4,244.00-7,343.00; 8/29/2005; Cemented 1st stage: 400 sx Prem Lite HS cmt, followed by 150 sx Class H cmt. Circ 50 bbls off DV tool.

Hydraulic Fracture; 1/25/2006; Frrac'd Dakota w/ 67,638 gals 60Q, 25# Purgel III LT CO2 foam frac fld carrying 113,300# 20/40 sand

Production Casing Cement (plug); 7,298.00-7,343.00; 8/29/2005; Cemented 1st stage: 400 sx Prem Lite HS cmt, followed by 150 sx Class H cmt. Circ 50 bbls off DV tool.