Hilcorp Energy Company

Current Schematic

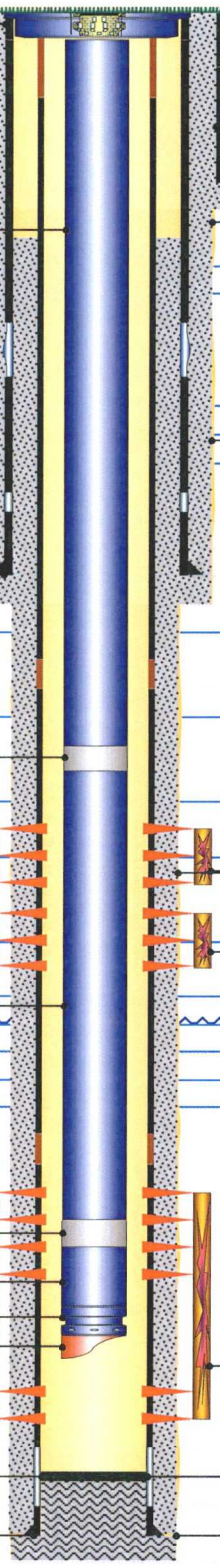
Well Name: SAN JUAN 27-5 UNIT #113F

API / UWI	Surface Legal Location	Field Name	License No.	State/Province	Well Configuration Type
3003930495	010-027N-005W-G	BASIN DAKOTA		NEW MEXICO	DEVIATED

Ground Elevation (ft)	Original KB/RT Elevation (ft)	KB-Ground Distance (ft)	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)
7,241.00	7,256.00	15.00		

DEVIATED, Original Hole, 7/10/2018 10:36:13 AM

MD (ftKB)	TVD (ftKB)	Vertical schematic (actual)
15.1	15.2	Tubing Hanger; 7 1/16 in; 50.00 lb/ft; L-80; 15.0 ftKB; 16.0 ftKB
	16.2	
18.4	18.5	
	41.1	
183.1	183.1	
	228.1	
229.0	229.0	1; Surface; 9 5/8 in; 9.00 in; 15.0 ftKB; 229.0 ftKB
	234.0	
3,560.0	3,373.4	Tubing; 2 3/8 in; 4.70 lb/ft; L-80; 16.0 ftKB; 5,592.4 ftKB
	3,394.5	OJO ALAMO (final)
3,728.0	3,527.2	KIRTLAND (final)
	3,605.4	
3,814.0	3,605.7	2; Intermediate1; 7 in; 6.37 in; 15.0 ftKB; CMT 1ST STAGE W/ 10BBL GEL PRE FLUSH W/ 2 BBLS H20/ SCAVENGER:20 SKS PREM LITE @ 11 0 PPG 17.89 GAL/SK W/ 3% CC, 0.25 PPS CELLO-FLAKE, 5 PPS LCM-1, 0.4% FL-52, 8% BENTONITE & 4% SMS/ LEAD: 40 SKS PREM LITE @ 12.1 PPG @ 11 29 GAL/SK H2O W/ 3% CC, 0.25 PPS CELLO-FLAKES, 5 PPS LCM-1, 0.4% FL-52, 8% BENTONITE & 0.4% SMS/ TAIL:90 SKS TYPE 3 CMT @ 14.60 PPG, 6.64 GAL/SK H2O, W/ 1% CC, 0.25 PPS CELLO- FLAKE & 0.2% FL-52/ PLUG DOWN @ 20:15 HRS/ 15BBLS CMT RETURN TO SURFACE; 4,611.3 ftKB
	3,607.8	
4,006.9	3,784.5	
	3,955.8	
4,321.9	4,090.3	
	4,334.9	
4,568.2	4,335.5	
	4,377.9	
4,611.2	4,378.5	
	4,387.4	
4,708.0	4,475.3	
	4,605.2	
4,848.1	4,615.4	
	4,907.4	
5,592.2	5,359.4	Tubing Pup Joint; 2 3/8 in; 4.70 lb/ft; J-55; 5,592.4 ftKB; 5,594.7 ftKB
	5,362.1	
5,850.1	5,617.3	MASSIVE CLIFF HOUSE (final)
	5,757.4	
6,000.0	5,767.2	MENE PERF - CLIFF HOUSE / MENEFEE UPPER; 5,990.0-6,277.0; 6/25/2018
	6,044.1	
6,315.9	6,083.1	
	6,118.2	MA PERF - POINT LOOKOUT / MENEFEE LOWER; 6,316.0-6,605.0; 6/22/2018
6,605.0	6,372.2	
	6,591.3	MA Tubing; 2 3/8 in; 4.70 lb/ft; J-55; 5,594.7 ftKB; 8,556.7 ftKB
7,520.0	7,287.1	UP
	8,053.2	GREENHORN (final)
8,350.1	8,117.1	GRANEROS (final)
	8,145.0	Dakota (final)
8,379.6	8,146.7	
	8,157.8	PERFORATED; 8,495.0-8,571.0; 8/4/2008
8,495.1	8,262.1	Tubing Pup Joint; 2 3/8 in; 4.70 lb/ft; J-55; 8,556.7 ftKB; 8,558.8 ftKB
	8,323.8	
8,558.7	8,325.8	Tubing; 2 3/8 in; 4.70 lb/ft; J-55; 8,558.8 ftKB; 8,590.1 ftKB
	8,337.9	
8,590.2	8,357.3	Pump Seating Nipple; 2 3/8 in; 4.70 lb/ft; J-55; 8,590.1 ftKB; 8,591.2 ftKB
	8,358.3	
8,592.2	8,359.3	EXPENDABLE CHECK; 2 3/8 in; 4.70 lb/ft; J-55; 8,591.2 ftKB; 8,592.1 ftKB
	8,378.9	
8,694.9	8,461.9	PERFORATED; 8,612.0-8,695.0; 8/4/2008
	8,497.7	
8,731.0	8,498.0	PBTD; 8,731.0
	8,498.4	
8,732.3	8,499.3	3; Production1; 4 1/2 in; 4.00 in; 15.0 ftKB; 8,732.3 ftKB
	8,500.0	



SURFACE CSG CMT; 15.0-229.0; 6/4/2008; CIRC 3 BBL'S CMT TO SURFACE

SURFACE CSG CMT (plug); 183.0-229.0; 6/4/2008; CIRC 3 BBL'S CMT TO SURFACE

Intermediate Casing Cement; 15.0-3,814.0; 6/23/2008; CMT 2ND STAGE W/ 10BBL GEL PRE FLUSH W/ 2 BBLS H20/ SCAVENGER:20 SKS PREM LITE @ 11 0 PPG 17.89 GAL/SK W/ 3% CC, 0.25 PPS CELLO-FLAKE, 5 PPS LCM-1, 0.4% FL-52, 8% BENTONITE & 4% SMS/ LEAD: 580 SKS PREM LITE @ 12.1 PPG @ 11 29 GAL/SK H2O W/ 3% CC, 0.25 PPS CELLO-FLAKES, 5 PPS LCM-1, 0.4% FL-52, 8% BENTONITE & 0.4% SMS/ TAIL:90 SKS TYPE 3 CMT @ 14.60 PPG, 6.64 GAL/SK H2O, W/ 1% CC, 0.25 PPS CELLO-FLAKE & 0.2% FL-52/ PLUG DOWN @ 02:00 HRS/ 60 BBLS CMT RETURN TO SURFACE

Intermediate Casing Cement; 3,814.0-4,611.3; 6/23/2008; CMT 1ST STAGE W/ 10BBL GEL PRE FLUSH W/ 2 BBLS H20/ SCAVENGER:20 SKS PREM LITE @ 11 0 PPG 17.89 GAL/SK W/ 3% CC, 0.25 PPS CELLO- FLAKE, 5 PPS LCM-1, 0.4% FL-52, 8% BENTONITE & 4% SMS/ LEAD: 40 SKS PREM LITE @ 12.1 PPG @ 11 29 GAL/SK H2O W/ 3% CC, 0.25 PPS CELLO-FLAKES, 5 PPS LCM-1, 0.4% FL-52, 8% BENTONITE & 0.4% SMS/ TAIL:90 SKS TYPE 3 CMT @ 14.60 PPG, 6.64 GAL/SK H2O, W/ 1% CC, 0.25 PPS CELLO- FLAKE & 0.2% FL-52/ PLUG DOWN @ 20:15 HRS/ 15BBLS CMT RETURN TO SURFACE

Hydraulic Frac; 6/25/2018; BROKE DOWN WELL WITH WATER AND 500 GAL 15% HCL. FOAM FRAC'D CLIFFHOUSE AND UPPER MENEFEE WITH 116,640 LBS 20/40 SAND AND 42,544 GAL SLICKWATER AND 1.86 MILLION SCF N2. 70 QUALITY. AVG RATE = 56 BPM, AVG PSI = 3032. ISIP WAS 1343 PSI. DROPPED 5 BIO-BALLS WITH 1/2 OF SAND PUMPED.

Production Casing Cement; 3,560.0-8,732.3; 6/29/2008

Hydraulic Frac; 6/25/2018; BROKE DOWN WELL WITH WATER AND 500 GAL 15% HCL. FOAM FRAC'D PT LOOKOUT AND LOWER MENEFEE WITH 129,360 LBS 20/40 SAND AND 51,461 GAL SLICKWATER AND 1.81 MILLION SCF N2. 70 QUALITY. AVG RATE = 55 BPM, AVG PSI = 2692. ISIP WAS 285 PSI. DROPPED 14 BIO-BALLS WITH 1/2 OF SAND PUMPED.

Hyd Frac-Slickwater; 8/12/2008; DAKOTA STIMULATION: (8495'-8695')

START 2% KCL WATER. BREAKDOWN THE ZONE AT 0 PSI @ 5 BPM.

FRAC THE ZONE WITH 88,368 GALS. SLICKWATER AT 55 BPM WITH 27,362 LBS. OF 20/40 TLC SAND. RAN B145 @ 1.5 GAL/1000 GALS.F103 @ .5. PUMPED 128.5 BBL FLUID FLUSH.
MIN. RATE: 51 BPM. MAX. RATE: 55 BPM. AVG. RATE: 53 BPM.
MIN. PSI: 2276 PSI. MAX. PSI: 3800 PSI. AVG. PSI: 3750 PSI. MAX. SAND CONC: 1.2 PSA. ISIP: 1630 PSI. FRAC GRADIENT: .63 PSI/FT. (BASED OFF ISDP) FLUID TO RECOVER (BREAKDOWN, ACID AND FRAC:2202 CLEAN BBLS). PUMPED2232 SLURRY BBLS.

Cement Plug; 8,731.0-8,732.4; 6/29/2008

Cement; 8,732.4-8,733.0; 6/29/2008