

# Sunray Energy

## University P #8

01-06-10

### Day #1

MIRU on the University P #8. Set up HES for cement/FE, called Basic to haul fresh/brine h2o, 1350'+- casing to be delivered around 1600, and picked up 8 5/8" x 5 1/2" casing head. Called Railroad Commision around 0800 and alerted them that we would be spudding around 1000 am. Spud well at 11:30 am and drill with BHA as follows from bottom; [1-12 1/4' security button bit, x-over sub, 1-6 3/8" teledrift, and 20-6 1/4" DC's]. Surveyed at 226' [.5 degree]. Surveyed at 471' [1 degrees]. Backed off drill string weight and continued drilling. Surveyed again at 564' [.5 degrees] and at 660' [.5 degrees]. Drilled to 700'.

01-07-10

### Day #2

Continue drilling . Ran survey at 907' and was at .5 degrees. Continue drilling to 1164' and ran survey [1 Degree]. Backed weight off of bit and continued drilling to 1265' and ran another survey [.5 degree]. TD surface hole at 1297', ran survey [.5 degree], and circulated well. COOH with BHA and RU casing crew to run casing. RIH with 34 jts 8 5/8" J-55 #24 casing [1300']. Circulated last joint to bottom/circulated well while rigging down casing crew and rigging up cement crew.

01-08-10

### Day #3

Had safety meeting and cemented well as follows; 20 blls fresh h2o, 450 sks EconoCem at #12.9, and 195 sks HalCem C cement at #14.8. Shut down pumps, drop 8 5/8" top rubber plug, and displaced with 80.3 blls fresh h2o. Bump plug and took to 800 psi and shut down. Release psi and floats holding. Circulated cement to surface. Wait 5 hours on cement and cut off casing. RU 8 5/8" x 5 1/2" wellhead and bop. RIH with BHA as follows from bottom; [1-7 7/8" Security bit, 1-6 1/2" down hole motor, 1-7 7/8" stabilizer, 1-6 1/2" teledrift, 1-6 1/4" DC, 1-7 7/8" stabilizer, 14-6

¼" DC's]. Test bop at 1150' +/- . Tagged cement at 1227' and drilled out FC and shoe joint. Ran Survey at 1500' and was at 1 degree.

01-09-10

Day #4

Back off drilling weight and continued drilling. Ran survey at 1585' and was at 1 degree. Continue drilling. Ran survey at 1705' and was at 1 degree. Continue drilling. Ran survey at 1840' and was at 1 degree. Continue drilling. Ran survey at 1964' and was at 1 degree. Continue drilling. Ran survey at 2212' and was at 1 degree. Continue drilling. Ran survey at 2336' and was at 1 degree. Continue drilling. Surveyed at 2336' and was at 1 degree. Continue drilling. Surveyed at 2490 and was at 1 degree. Continued drilling.

01-10-10

Day #5

Ran survey at 2620' and was at 1 degree. Continued drilling. Ran survey at 2740' and was at 1 degree. Continue drilling. Are drilling ahead with surveys ran at 2874', 2999', 3133', 3247', and 3445' with all surveys at 1 degree. Drilled to 3685'.

01-11-10

Day #6

Drilling ahead. Drilling has been steady with surveys as follows; 3650'-1 degree, 3871'-.5 degree, 4113'-1 degree, 4275'-1 degree, and 4475'-1 degree. Have shown minimal losses and drilled to 4485'.

01-12-10

Day #7

Continue drilling ahead with pickup in drilling rate. Surveys at 4610'-.5 degree, 4895'-.5 degree, 5112'-1 degree, 5319'-1 degree, and 5520'-1 degree. Lost returns at 5675'.

01-13-10

Day #8

Started mixing paper and fiber in mud and regained circulation in 1 hour+-. Continue drilling. Surveys at 5725'-1 degree, and 5940'-1 degree. Showed some light losses at 6330+-. Drilled to 6365'.

01-14-10

Day # 9

Continue drilling. TD well at 6476'. Circulate well, run viscous pill to sweep hole, and ran survey at 6440[1-degree]. Notified railroad commission of intent to run casing and cement, and start out of hole with bit and BHA. Out of hole RU casing crew and RIH with 173 jts of 5 ½" J-55 17# casing [including marker joints at 4000' and 5000' +/-]. Tagged bottom 6476' and circulated well. RD casing crew and RU cement crew. Cemented well with 20 blls fresh h2o, 18 blls superflush, 10 blls fresh h2o, 17 blls of scavenger poz weighed at 11.5#, 600 sks of [lead] Econocem H cement weighed at 11.8# and 420 sks [tail] Versacem H [tail] cement weighed at 13.5#.

01-15-10

Day #10

Displaced with 149 blls fresh h2o and bumped plug. Seeing traces of cement with 18 blls left in displacement started losing returns, so slowed rate to let formation heal. Released psi and floats holding. RD cement crew, rigged down bop, set slips and cut off casing. Released rig at 0330 am.

## Sunray Energy

### University P #8

3-17-2010

#### Day #1

MIRU work over unit on University P #8. RU bop, and RIH with 5 ½" scraper and bit on 2 7/8" tubing. Tagged up at 6380', pulled 5 jts and SDSIFN.

Daily costs;

Rig 2420

Bop 200

Cons 750

3-18-2010

#### Day #2

RIH to 6380' and pickled tubing with 500 gal 15% HCL acid and circulated hole with 2% kcl h2o, leaving another 500 gal of 15% HCL acid on spot for perforating. COOH with 5 ½" scraper and bit. RD bop, RU frac valve, and RIH with wireline and perforate 1<sup>st</sup> stage perforations at 6350'-56', 6331'-35' 6265'-68', 6236'-39', 6216'-19', 6163'-67', qand6122'-25'[120 degree phasing and 2spf]. COOH with wireline and SDSNFN.

Daily costs;

Rig 3150

Basic bop 200

Basic h2o 220

Schlumberger acid 5520

Guardian 1800 [5 day rental]

Cobra bit/scrapper 625

Cons 750

3-19-2080

Day #3

MIRU Schlumberger frac crew. Psi test lines to 5000 psi, break well with 2% kcl h2o and start acid ball out job using 3000 gal 15% HCL acid while spacing 80-5/8" bio frac balls through out acid evenly. Displaced acid with 152.1 blls of 2% kcl, shut down, then surged frac balls off of perforations several times. Frac 1<sup>st</sup> stage of well using 140000# 20/40 ottawa sand with average rate of 50 bpm and 1400 psi. Displaced with 500 gal 15% spot acid and 5507 gal 2% kcl. ISIP-1260 psi, 5 min-771 psi, 10 min-720 psi, 15 min-701 psi. RU Schlumberger wire line and RIH with 5 1/2" retrievable BP [under psi] and set at 5965". Bleed psi off of well and COOH with wire line. RU and RIH and perforate 2<sup>nd</sup> stage perfs at 5931'-36-, 5896'-01', 5844'-49', 5788'-92', 5733'-37', 5678'-82', 5636'-39', 5590'-92' [120 degree phasing at 2 spf]. COOH with wire line and RU frac crew. Break down well with 2% kcl and start acid ball out job using 3000 gal 15% HCL acid while spacing 100-5/8" bio balls through out acid evenly. Displaced acid with 151.3 blls 2% kcl h2o, shut down, then surged frac balls off of perforations several times. Frac 2<sup>nd</sup> stage of well using 180000# 20/40 ottawa sand with average rate of 60 bpm and 1760 psi. Displaced well with 5390 gal of 2% kcl h2o. ISIP-780 psi, 5 min-554 psi, 10 min-505 psi, 15 min-470 psi. SDSIFN

Daily costs;

Rig-2820

Schlumberger frac 152000

Schlumberger wireline 10770

Cobra retrievable BP 1880

Basic bop 200

Guardian 0 2<sup>nd</sup> day

Big D 400

Consultant 750