WELL NAME: Homer Deep Unit 9-11CH
STATE: Colorado
API NO: 05-045-22489
TD: 18988'
TVD: 7411'
FIELD: South Shale Ridge
COUNTY: Garfield
SPUD DATE: 12/8/2014
TD Date: 05/21/15
Completion Date: 08/14/15

LSE#: COC012733A
SRF LOC: NWNW S9 T8S R98W
BHL: NWSW S15 T8S R98W
FORMATION: Mancos
ELEVATION: 5524
KB: 25'
Updated: 10/15/15 jad

CEMENT & HOLE DATA

	OD	GRADE	THD	WT/FT	TOP	EOC	# JTS	BIT SIZE	DEPTH	SX	WT.	Yield	TOC
Cond Csg	20.000"	Line			0	120'		30.000"	145'	320			0
Srf Csg	10.750"	J-55	STC	40.5	0'	1130'	27	14.750"	1130'	170	12.3 ppg	2.38	0'
										250	12.8 ppg	2.11	
Int Csg 1	7.625"	P-110		29.7	0'	6532'	155	9.875"	6532'	125	12.5 ppg	1.73	4900'
										325	13.5 ppg	1.51	
										500	12.5 ppg	1.88	
Prod Csg	5.500"	P-110	DQX	20	0'	5242'	118	6.750"		345	12.6 ppg	1.75	5160'
	4.500"	P-110	DQX	13.5	5242'	17312'	292		18988'	2000	13.5 ppg	1.48	

HISTORY:

5/21/2015	Reach TD
4/21/2015	Rtn to CH wellbore. Run CBL
12/20/14-4/20/14	Drlg other wells on pad
12/19/2014	Run CBL
12/18/2014	Set intermediate csg
12/8/2014	Set Surf csg.
12/6/2014	Spud

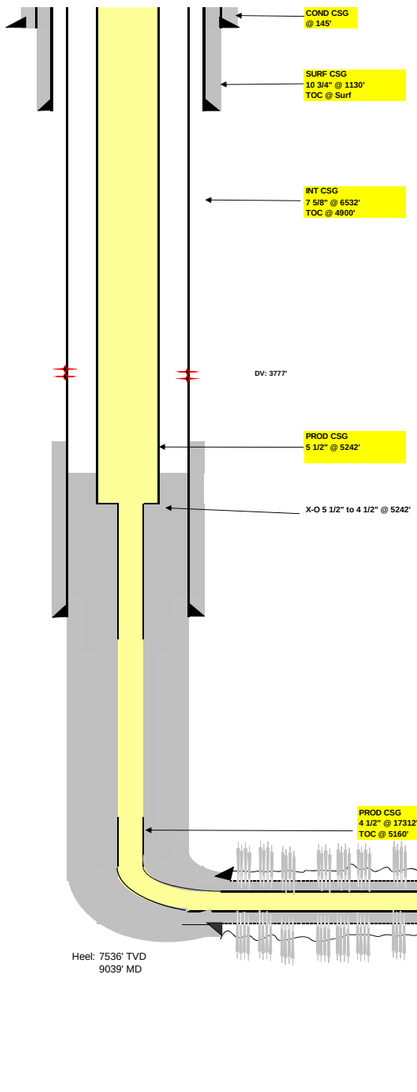
LOGS

12/19/2014	Intermediate CBL
4/21/2015	CBL

Perforation Specs		Totals	
Hole Size	0.37"	Total Footage	10095
SPF	6	Total Holes	1704
Phasing	60°		

Tubing

DATE	



Frac Stage	Water BBLs	Acid-15% gal	#100	#40/70	#30/50	Max Rate/ Max Psi	Avg Rate/ AVG PSI	ISDP psi / FG	ISIP psi / Step Rate / FG	PERF	PLUG
1 7/31/2015	10,485	1008	60,520	124,820	0	55.2 7,641	45.5 6,999		3,751 5 min: 3,081 0.987	17195-97' 17160-62' 17150-52' 17140-41' 17130-31'	
2 7/31/2015	11,523	1008	60,600	219,420	0	60.2 7,454	50.9 7,081		3,791 5 min: 3,399 0.942	16960-61' 16920-22' 16880-81' 16840-41'	17,000'
3 7/31/2015	12,434	1008	61,120	172,080	0	52.3 7,766	43.8 6,964		3,537 5 min: 3,399 0.910	16760-62' 16720-22' 16680-81' 16644-45'	16,800'
4 8/1/2015	6,268	1008	5,000	44,060	0	40.2 7,883	31.2 7,140		4,027 5 min: 3,357 0.973	16560-62' 16520-22' 16480-81' 16440-41'	16,604'
5 8/1/2015	6,865	1008	15,680	68,947	0	52.6 7,675	39.5 7,143		4,004 5 min: 3,409 0.970	16360-62' 16320-22' 16275-76' 16243-44'	16,400'
6 8/1/2015	13,452	1018	32,000	279,562	0	59.7 7,466	54.6 7,130		3,643 5 min: 3,396 0.921	16160-62' 16120-22' 16080-81' 16040-41'	16,210'
7 8/1/2015	15,505	1018	53,560	277,060	0	63.0 7,563	57.9 6,973		3,753 5 min: 3,426 0.940	15960-62' 15920-22' 15880-81' 15840-41'	16,000'
8 8/2/2015	13,699	1008	63,740	239,620	0	65.3 7,714	54.4 7,086		3,864 5 min: 3,584 0.950	15760-62' 15720-22' 15680-81' 15640-41'	15,800'
9 8/2/2015	12,633	1008	14,680	261,400	0	60.5 7,755	51.6 7,058		3,804 5 min: 3,426 0.940	15560-62' 15517-19' 15484-85' 15443-44'	15,610'
10 8/2/2015	4,267	1008	28,655	0	0	46.1 845	32.0 6,847		3,783 5 min: 3,480 0.940	15360-62' 15320-22' 15280-81' 15240-41'	15,410'
11 8/3/2015	4,577	1008	3,000	6,420	0	27.3 7,464	19.2 6,966		4,641 5 min: 3,750 1.054	15160-62' 15115-17' 15086-87' 15044-45'	15,195'
12 8/3/2015	14,204	1008	1,845	297,970	0	55.3 7,829	40.9 6,966		3,692 5 min: 3,112 0.900	14960-62' 14920-22' 14880-81' 14840-41'	15,005'
13 8/4/2015	5,451	1500	2,500	38,120	0	33.1 7,982	21.7 7,145		6,948 5 min: 3,342 0.933	14760-62' 14720-22' 14680-81' 14640-41'	14,800'
14 8/4/2015	15,094	1500	21,647	385,520	0	57.5 7,922	47.0 7,092		3,689 5 min: 3,302 0.926	14560-62' 14520-22' 14480-81' 14440-41'	14,592'
15 8/5/2015	6,478	1512	0	52,500	0	60.2 7,454	50.9 7,081		4,169 5 min: 3,399 0.990	14240-42' 14200-02' 14160-61' 14120-21'	14,270'
16 8/5/2015	2,287	1500	1,340	3,000	0	22.0 7,794	17.1 7,391		9,376 5 min: 4,556 1.240	14060-62' 14020-22' 13980-81' 13940-41'	14,100'
17 8/5/2015	3,153	1500	695	1,560	0	22.2 7,851	16.0 7,352		5,890 5 min: 4,909 1.220	13860-62' 13820-22' 13780-81' 13740-41'	13,895'
18 8/5/2015	1,607	1750	250	257	0	20.3 7,621	15.0 7,166		6,010 5 min: 4,645 1.236	13655-67' 13614-16' 13580-81' 13540-41'	13,700'
19 8/6/2015	7,559	1008	26,300	74,780	0	50.3 8,572	31.1 6,994		4,616 5 min: 3,774 1.049	13460-62' 13420-22' 13380-81' 13340-41'	13,500'
20 8/6/2015	11,081	1008	24,440	156,480	0	53.3 7,982	53.4 6,801		6,535 5 min: 3,450 1.049	13265-67' 13224-26' 13180-81' 13140-41'	13,292'
21 8/6/2015	13,125	1008	0	252,977	0	52.7 7,539	42.1 6,637		3,772 5 min: 3,320 0.936	13060-62' 13020-22' 12980-81' 12940-41'	13,100'
22 8/7/2015	17,249	1038	55,775	357,844	0	60.8 7,351	55.7 6,759		3,350 5 min: 3,350 0.946	12860-62' 12820-22' 12780-81' 12740-41'	12,895'
23 8/7/2015	7,573	1005	3,000	62,684	0	38.8 7,676	29.8 7,112		4,645 5 min: 3,591 1.052	12660-62' 12620-22' 12578-79' 12535-36'	12,700'
24 8/7/2015	3,167	1005	500	1,009	0	26.7 7,773	17.7 7,364		5,851 5 min: 4,435 1.212	12462-64' 12420-22' 12380-81' 12340-41'	12,510'

Frac Stage	Water BBLs	Acid-15% BBLs	#100	#40/70	#30/50	Max Rate/ Max Psi	Avg Rate/ AVG PSI	ISDP psi / FG	ISIP psi / Step Rate / FG	PERF	PLUG
25 8/7/2015	15,934	997	62,500	203,412	0	56.6 7,776	39.0 6,757		4,673 5 min: 3,620 1.055	12260-62' 12218-20' 12176-77' 12145-46'	12,300'
26 8/8/2015	19,777	1021	60,273	442,150	0	57.0 7,712	46.8 7,015		6,252 5 min: 3,566 0.999	12060-62' 12020-22' 11980-81' 11940-41'	12,104'
27 8/8/2015	13,909	1021	59,909	229,496	0	57.6 7,986	46.1 6,922		6,252 5 min: 3,566 0.999	11860-62' 11820-22' 11780-81' 11740-41'	11,900'
28 8/9/2015	13,759	1023	59,130	246,134	0	66.4 7,799	49.8 7,080		4,229 5 min: 3,688 0.996	11660-62' 11620-22' 11580-81' 11540-41'	11,694'
29 8/9/2015	18,670	1000	61,200	390,547	0	57.9 7,582	53.3 7,106		4,576 5 min: 3,843 1.042	11460-62' 11418-20' 11374-75' 11342-43'	11,500'
30 8/9/2015	18,676	1000	59,222	381,138	0	58.6 7,578	53.2 7,126		4,541 5 min: 4,069 1.037	11260-62' 11220-22' 11184-85' 11140-41'	11,305'
31 8/10/2015	15,050	1003	59,300	323,095	0	62.4 7,651	49.4 7,104		4,281 5 min: 3,775 1.003	11056-58' 11014-16' 10982-83' 10940-41'	11,095'
32 8/10/2015	4,571	998	6,342	18,800	0	26.0 7,936	16.0 7,342		6,514 5 min: 4,799 10 min: 4,529 15 min: 4,354 1.299	10860-62' 10820-22' 10780-81' 10740-41'	10,900'
33 8/10/2015	3,314	1019	6,325	0	0	26.5 7,555	21.0 7,239		5,661 5 min: 4,388 1.156	10596-98' 10561-63' 10526-27' 10491-92'	10,650'
34 8/11/2015	19,304	2016	2,000	419,680	23,000	61.3 7,652	41.0 7,072		4,714 5 min: 3,903 1.059	10455-57' 10420-22' 10380-81' 10346-47'	10,484'
35 8/11/2015	2,702	1066	964	5,295	0	22.0 7,820	14.0 7,181		4,595 5 min: 4,481 1.044	10260-62' 10220-22' 10180-81' 10140-41'	10,306'
36 8/11/2015	4,943	2016	4,077	17,869	0	26.8 7,956	18.5 7,118		5,532 5 min: 4,388 1.168	10060-62' 10020-22' 9980-81' 9940-41'	10,100'
37 8/12/2015	6,300	1691	0	82,940	0	48.1 8,240	23.7 7,092		7,737 5 min: 3,686 1.028	9862-64' 9820-22' 9780-81' 9740-41'	9,896'
38 8/12/2015	14,892	1008	79,540	259,700	0	56.7 7,841	42.5 7,037		4,314 5 min: 3,622 1.006	9660-62' 9620-22' 9580-81' 9540-41'	9,700'
39 8/12/2015	19,519	1008	60,860	449,700	43,960	70.4 7,640	61.8 6,896		4,202 5 min: 3,579 0.991	9460-62' 9420-22' 9380-81' 9340-41'	9,490'
40 8/13/2015	14,670	1008	77,214	272,200	0	68.4 7,557	57.3 7,043		4,906 5 min: 3,901 1.084	9260-62' 9220-22' 9180-81' 9140-41'	9,300'
41 8/13/2015	16,864	1008	89,260	489,480	13,000	70.8 7,582	60.3 7,102		4,853 5 min: 3,853 1.077	9060-62' 9020-22' 8980-81' 8940-41'	9,090'
42 8/13/2015	17,785	1008	98,560	454,060	70,780	70.4 7,631	62.4 6,969		4,945 5 min: 3,897 1.090	8858-60' 8815-17' 8775-76' 8745-46'	8,895'
43 8/13/2015	17,603	1008	67,600	458,780	42,020	70.4 7,542	65.3 6,940		4,404 5 min: 3,493 1.019	8662-64' 8620-22' 8580-81' 8540-41'	8,710'
44 8/14/2015	11,007	1008	64,280	309,420	0	71.3 7,498	67.3 6,422		4,329 5 min: 3,435 1.012	8460-62' 8420-22' 8380-81' 8340-41'	8,500'
45 8/14/2015	15,057	1008	86,500	337,060	0	70.8 7,574	68.2 6,315		4,049 5 min: 3,344 0.976	8260-62' 8220-22' 8180-81' 8140-41'	8,300'
46 8/14/2015	12,194	1008	88,643	264,960	0	70.9 7,629	64.7 6,728		3,848 5 min: 3,476 0.949	8060-62' 8020-22' 7980-81' 7940-41'	8,100'
47 8/14/2015	2,499	1008	6,909	31,388	62,864	51.0 4,945	48.3 3,970		2,979 5 min: 2,949 10 min: 2,926 15 min: 2,905 0.853	7162-64' 7142-44' 7122-23' 7102-03'	7,200'