



Production Schematic

State/Province NM	County EDDY	API/UWI 3001540522	Surface Legal Location SEC13 T21S R27E	Well Configuration Type HORIZONTAL
KB - Ground Level (ft) 28.00	CF Elev (ft)	Ground Elev MSL (ft) 3,177.40	KB - Casing Flange (ft)	Original Drig Spud Date 12/13/2012
			Original Drig Rig Release Date 1/2/2013	On Production Date 2/12/2013

*****WASHAKIE SCHEMATIC*****

HORIZONTAL - ST01, 3/15/2013 2:59:34 PM

Wellbore Sections

DLS	Wellbore Name	Section Des	Start Date	Act Top (ftKB)	Act Btm (ftKB)	Hole Size (in)
DLS (... 0 3	ST01	PRODUCTION	12/26/2012	4,400.0	9,572.0	8 3/4

Casing Strings

Csg Des	OD (in)	Wt/Len (lb/ft)	Grade	Top (ftKB)	Set Depth (ftKB)
CONDUCTOR	20	106.50	K-55	28.0	150.0
SURFACE	13 3/8	48.00	H-40	28.0	345.0
INTERMEDIATE	9 5/8	40.00	J-55	28.0	2,584.0
PRODUCTION	5 1/2	17.00	P-110	28.0	9,568.0

Cement Fluids

String	Class	Fluid	Fluid Des	Amount (sacks)	Yield (ft ³ /sack)	Dens (lb/gal)	Vol Pumped (bbl)
SURFACE, 345.0ftKB	C	LEAD		650	1.34	14.80	155.0
INTERMEDIATE, 2,584.0ftKB		SPACER				8.33	10.0
INTERMEDIATE, 2,584.0ftKB	C	LEAD		200	1.73	12.60	62.0
INTERMEDIATE, 2,584.0ftKB	60/40 POZ						
INTERMEDIATE, 2,584.0ftKB	C	TAIL		300	1.33	14.80	72.0
INTERMEDIATE, 2,584.0ftKB		DISPLACEMENT				8.33	194.0
INTERMEDIATE, 2,584.0ftKB		SPACER					10.0
INTERMEDIATE, 2,584.0ftKB	C	LEAD		670	1.73	12.60	206.0
INTERMEDIATE, 2,584.0ftKB	60/40						
INTERMEDIATE, 2,584.0ftKB	C	TAIL		150	1.33	14.80	36.0
INTERMEDIATE, 2,584.0ftKB		DISPLACEMENT				8.33	114.0
INTERMEDIATE, 2,584.0ftKB		MUD CLEAN II	MUD FLUSH			8.40	15.0
INTERMEDIATE, 2,584.0ftKB		SPACER	SPACER				
INTERMEDIATE, 2,584.0ftKB	H	LEAD	CEMEX CL-H + 0.35% R-3	50	1.18	15.60	10.0
INTERMEDIATE, 2,584.0ftKB		SPACER	SPACER			8.40	5.0
INTERMEDIATE, 2,584.0ftKB		DISPLACEMENT	MUD			8.70	93.0
PRODUCTION, 9,568.0ftKB	H	LEAD		220	1.18	15.60	46.0
PRODUCTION, 9,568.0ftKB	POZ	LEAD		285	2.45	11.80	124.0
PRODUCTION, 9,568.0ftKB	50/50						
PRODUCTION, 9,568.0ftKB	POZ	TAIL		1,300	1.28	14.20	296.0
PRODUCTION, 9,568.0ftKB	50/50						
PRODUCTION, 9,568.0ftKB		DISPLACEMENT				8.40	221.0

Stimulations & Treatment Stages

Type	Date	Total Clean Volume Pumped (bbl)	Proppant Frm (lb)	Frac Gradient (psi/ft)	Min Top Depth (ftKB)	Max Btm Depth (ftKB)	Zone
HYDRAULIC FRAC	1/24/2013	3273.70	175,149.0	0.81	5,131.0	5,512.0	DELAWARE, ST01
HYDRAULIC FRAC	1/24/2013	3308.20	179,679.0	0.81	5,637.0	6,018.0	DELAWARE, ST01
HYDRAULIC FRAC	1/24/2013	3295.60	177,455.0	0.81	6,144.0	6,525.0	DELAWARE, ST01
HYDRAULIC FRAC	1/24/2013	3328.00	184,580.0	0.81	6,651.0	7,032.0	DELAWARE, ST01
HYDRAULIC FRAC	1/24/2013	3344.40	180,177.0	0.81	7,158.0	7,539.0	DELAWARE, ST01
HYDRAULIC FRAC	1/23/2013	3366.30	171,474.0	0.81	7,664.0	8,046.0	DELAWARE, ST01
HYDRAULIC FRAC	1/23/2013	3364.30	179,720.0	0.81	8,171.0	8,552.0	DELAWARE, ST01
HYDRAULIC FRAC	1/23/2013	3349.10	177,661.0	0.81	8,678.0	9,059.0	DELAWARE, ST01
HYDRAULIC FRAC	1/23/2013	3370.50	179,210.0	0.81	9,185.0	9,570.0	DELAWARE, ST01

TUBING - PRODUCTION set at 4,680.2ftKB on 2/11/2013 00:00

	Tubing Description		Run Date		String Length (ft)		Set Depth / EOT (ftKB)		
	TUBING - PRODUCTION		2/11/2013		4,648.00		4,680.2		
	Item Des		Jts	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Top (ftKB)	Btm (ftKB)
	Tubing		128	2 7/8	6.50	L-80	4,052.22	32.2	4,084.4

Lone Tree Draw 13 State Com 4H – Completion

Total Stages: 9

Total 20/40 White Sand: 1,276,142 LBS

Total 16/30 Siber Prop Sand: 329,438 LBS

Total Sand: 1,605,580 LBS

Total Fluid: 26,599 BBLS

Lone Tree Draw 13 State Com 5H (PROPOSED) – Completion

The completion is expected to have the same number of stages and similar totals for sand and fluid used.