



## DRILLING OPTIMIZATION RESULTS IN SIGNIFICANT REDUCTION OF DRILLING TIME

Country:.....**Kazakhstan**  
 Area:.....**Mangystau**  
 Field:.....**West Zhetybai**  
 Period...**January-February 2013**

Previous drilling experience in this field showed poor performance. The drilling was done by a large number of tricone and PDC bits. The bits showed poor performance and heavy damage. Optimization of the drilling by KazDuCo Services and the direct supervision of the Bit service specialist reduced the number bits and bit runs. It also increased the performance which turned into significant reduction of drilling time and drilling cost.

Table 1 Comparative table of bit records

Well	Size	Type	Quantity	Bit runs	Total intervals	Drilling hours	Av.ROP	Trip time	Total hours
OFFSET WELL	11 5/8"	Tricone	2	2	797.3	67.6	11.79	8	1007
	Total per section		2	2	797.3	67.6	11.79		
	8 1/2"	Tricone	8	9	944.5	348	2.71	119	
		PDC	1	3	950.2	464.4	2.05		
Total per section			9	12	1894.7	812.4	2.33		
Well J-59 USES KAZDUCO BIT SERVICES	11 5/8"	PDC	1	1	774	43.3	17.88	0	378.1
	Total per section		1	1	774	44.3	17.88		
	8 1/2"	Tricone	1	1	32.9	16	2.06	54	
		PDC	3	4	1936	264.78	7.31		
Total per section			4	5	1968.9	280.78	7		

Table 2 The results of working the bits in the well J-59

Bit type	SN	Depth In	Depth Out	Rotating Hours	Av.ROP	Dull grading	Formation
8 1/2" KDC657	121607	1204	2277	71.7	15	2-3-BT-N,S-X-I-WT-LOG	Claystone, Sandstone, Dolomite, Anhydrite Limestone, Marlstone, Calcareus Sandstone
8 1/2" KDC666M	102317	2277	2850	65.7	8.7	1-1-WT-N,S-X-I-BT-PR	Claystone,Siltstone, Sandstone, Anhydrite, Clayey Limestone, Dolomite
8 1/2" KDC666M	102317	2850	2998	2998	2.4	2-3-WT-N,S-X-I-BT-PR	
8 1/2" S13GP	D168690	2998	3030.9	16	2.1	1-1-WT-A-E-I-TR-CP	Limestone, Dolomite with interlayers of chert

8 1/2" KDC657 sn121607 from 1204m to 2277m



8 1/2" KDC666M sn102317 from 2277m to 2850m



8 1/2" KDC666M sn102317 from 2850m to 2998m



8 1/2" S13GP snD168690 from 2998m to 3030.9m

