



Schematic Regulatory

HARRINGTON #9N

District SOUTH	Field Name MV/DK COM	County RIO ARRIBA	State/Province NEW MEXICO	API / UWI 3003931140	
Original Spud Date 12/26/2012	Surface Legal Location 031-027N-007W-J	East/West Distance (ft) 1,786.00	East/West Reference FEL	North/South Distance (ft) 1,600.00	North/South Reference FSL

Well Config: DEVIATED - Original Hole, 3/12/2013 1:32:11 PM

ftKB (MD)	ftKB (TVD)	Schematic - Actual	Frm Final
0			
15			
16			
18			RCVD APR 22 '13
18			OIL CONS. DIV.
26			DIST. 3
30			
35			
198			
199			
228			
229		Surface, 9 5/8; 9,001; 15; 214.0	
234			
1,424	1,380		OJO ALAMO, 1,424
1,594	1,535		KIRTLAND, 1,594
2,023	1,922		FRUITLAND, 2,023
2,309	2,180		PICTURED CLIFFS, 2,309
2,493	2,346		LEWIS, 2,493
2,827	2,662		
2,836	2,671		HUERFANITO BENTONITE,
2,837	2,671		2,836
3,200	3,031		
3,266	3,097		CHACRA, 3,266
4,002	3,832		MASSIVE CLIFF HOUSE, 4,002
4,019	3,850		MENEFEE, 4,019
4,159	3,990		
4,161	3,992		
4,166	3,812		
4,166	3,768		
4,210	814		
4,211	747	Intermediate 1, 7; 6,366; 15; 4,195.9	
4,222	2		
4,396	2,710		
4,610	4,440	PERF - MENEFEE, 4,396-4,610, 3/7/2013	
4,629	4,459		
4,631	4,461		
4,660	4,490		POINT LOOKOUT, 4,660
4,664	4,494	PERF - POINT LOOKOUT, 4,664-4,972,	
4,972	4,802	3/7/2013	
5,061	4,891		MANCOS, 5,061
5,798	5,628		UPPER GALLUP, 5,798
6,499	6,329		
6,501	6,331		
6,520	6,350		
6,530	6,360		
6,612	6,442		GREENHORN, 6,612
6,669	6,499		GRANEROS, 6,669
6,725	6,555		TWO WELLS, 6,725
6,728	6,558		
6,776	6,606		PAGUATE, 6,776
6,817	6,647	PERF - DAKOTA, 6,728-6,878, 3/7/2013	UPPER CUBERO, 6,817
6,841	6,671		LOWER CUBERO, 6,841
6,878	6,708		
6,908			
6,909			
6,909			
6,929			
6,931		Production 1, 4 1/2; 4,000; 15; 6,915.8	
6,940			

INTEROFFICE MEMO

TO: Records & Regulatory

DATE: 2/13/2013

FROM: Sharon LeBeau

LOCATION: Farmington, N.M.

Final Geologic Summary

Well Name & No.: Harrington 9N API: 3003931140

Location: SE Section 31 Twp. 27N Rge. 7W

County & State: San Juan, New Mexico

Elevation: GL: 6036' KB: 6051'

Tops From: X Wireline Log X Mudlog Correlation

Ojo Alamo	<u>1424'</u>	Chacra	<u>3266'</u>	Greenhorn	<u>6612'</u>
Kirtland	<u>1594'</u>	Upper Cliff House	<u>not present</u>	Graneros	<u>6669'</u>
Fruitland	<u>2023'</u>	Massive Cliff House	<u>4002'</u>	Dakota (Two Wells)	<u>6725'</u>
Pictured Cliffs	<u>2309'</u>	Menefee	<u>4019'</u>	Paguate	<u>6776'</u>
Lewis	<u>2493'</u>	Point Lookout	<u>4660'</u>	Upper Cubero	<u>6817'</u>
Huerfano Bentonite	<u>2836'</u>	Mancos	<u>5061'</u>	Lower Cubero	<u>6841'</u>
		Upper Gallup	<u>5798'</u>	Encinal	<u>nde</u>
				Burro Canyon	<u> </u>
				Morrison	<u> </u>
				PBTD	<u>6908'</u>
				LTD	<u>6908'</u>

Electric Logs Run: Cement Bond Log w/ Gamma Ray, VDL & Casing Collars

Well Cored? X No Yes

Well DST'd? X No Yes

Geologist: Sharon LeBeau