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# **MINERAL RESOURCES INC**

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**Island Grove 2-32**

**Weld County , Colorado**

**Cement Intermediate Casing**

**11-May-2012**

**Job Site Documents**

HALLIBURTON

*Cementing Job Summary*

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Clean Spacer III		40.00	bbl	10.5	3.86	24.21	5.0	
2	EconoCem B3 12.5#	ECONOCHEM (TM) SYSTEM (452992)	345.0	sacks	12.5	1.98	10.73	5.0	10.73
10.73 Gal		FRESH WATER							
3	ExpandaCem B1 14.6#	EXPANDACHEM (TM) SYSTEM (452979)	110.0	sacks	14.6	1.46	6.09	5.0	6.09
6.09 Gal		FRESH WATER							
<b>Calculated Values</b>		<b>Pressures</b>		<b>Volumes</b>					
Displacement	286	Shut In: Instant		Lost Returns	0	Cement Slurry	149	Pad	
Top Of Cement		5 Min		Cement Returns	0	Actual Displacement	286	Treatment	
Frac Gradient		15 Min		Spacers	40	Load and Breakdown		Total Job	475
<b>Rates</b>									
Circulating	8	Mixing	8	Displacement	8	Avg. Job	8		
Cement Left In Pipe	Amount	42 ft	Reason	Shoe Joint					
Frac Ring # 1 @	ID	Frac ring # 2 @	ID	Frac Ring # 3 @	ID	Frac Ring # 4 @	ID		
The Information Stated Herein Is Correct				Customer Representative Signature					

## Cementing Job Log

The Road to Excellence Starts with Safety

Sold To #: 345252	Ship To #: 2925111	Quote #:	Sales Order #: 9508019
Customer: MINERAL RESOURCES INC		Customer Rep: Benge, Red	
Well Name: Island Grove	Well #: 2-32	API/UWI #: 05-123-35463	
Field:	City (SAP): GREELEY	County/Parish: Weld	State: Colorado
Legal Description:			
Lat: N 0 deg. OR N 0 deg. 0 min. 0 secs.		Long: E 0 deg. OR E 0 deg. 0 min. 0 secs.	
Contractor: Ensign		Rig/Platform Name/Num: 14	
Job Purpose: Cement Intermediate Casing			Ticket Amount:
Well Type: Development Well		Job Type: Cement Intermediate Casing	
Sales Person: FLING, MATTHEW		Srvc Supervisor: FANTASIA, JOSEPH	MBU ID Emp #: 485445

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Arrive at Location from Service Center	05/11/2012 07:00							
Assessment Of Location Safety Meeting	05/11/2012 07:30							
Start Job	05/11/2012 11:50							
Test Lines	05/11/2012 12:00						3420.0	PRESSURE TEST LINES TO 3500 PSI
Pump Spacer 1	05/11/2012 12:10		5	40			254.0	40 BBLs CELAN SPACER MIXED AT 10.5 PPG USING RIG WATER
Pump Lead Cement	05/11/2012 12:28		8	121			440.0	345 SKS ECONOCEM MIXED AT 12.5 PPG USING RIG WATER
Pump Tail Cement	05/11/2012 12:45		8	28			340.0	110 SKS EXPANDACEM MIXED AT 14.6 PPG
Shutdown	05/11/2012 12:55							
Drop Top Plug	05/11/2012 12:58							PLUG PRELOADED
Pump Displacement	05/11/2012 13:00		8	286			144.0	GOOD RETURNS THROUGHOUT
Bump Plug	05/11/2012 13:50		3				1850.0	PLUG LANDED AT 1850 PSI AND BROUGHT TO 2475 PSI. PRESSURE HELD FOR 5 MINUTES FOR A CASING PRESSURE TEST.
Check Floats	05/11/2012 13:55							FLOATS HELD
End Job	05/11/2012 14:00							