

BISON OIL WELL CEMENTING, INC.



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REF. INVOICE # 9556
LOCATION WCR 46+31
FOREMAN Daniel Saltzman

TREATMENT REPORT

DATE	WELL NAME	SECTION	TWP	RGE	COUNTY	FORMATION
2-7-11	Five Rivers K 15-31D	16	4N	66W	Weld	

CHARGE TO <u>Noble</u>	OWNER
MAILING ADDRESS	OPERATOR <u>Noble</u>
CITY	CONTRACTOR <u>ENSIGN 128</u>
STATE ZIP CODE	DISTANCE TO LOCATION
TIME ARRIVED ON LOCATION <u>11:28</u>	TIME LEFT LOCATION <u>5:05 AM</u>

WELL DATA			PRESSURE LIMITATIONS		
HOLE SIZE <u>12 1/4</u>	TUBING SIZE	PERFORATIONS		THEORETICAL	INSTRUCTED
TOTAL DEPTH <u>698.2</u>	TUBING DEPTH	SHOTS/FT	SURFACE PIPE ANNULUS LONG		
<u>BPTD 644.46</u>	TUBING WEIGHT	OPEN HOLE	STRING		
CASING SIZE <u>8 5/8</u>	TUBING CONDITION		TUBING		
CASING DEPTH <u>687.66</u>		TREATMENT VIA	TYPE OF TREATMENT		TREATMENT RATE
CASING WEIGHT <u>29 #</u>	PACKER DEPTH		<input checked="" type="checkbox"/> SURFACE PIPE	BREAKDOWN BPM	
CASING CONDITION <u>good</u>			<input type="checkbox"/> PRODUCTION CASING	INITIAL BPM	
			<input type="checkbox"/> SQUEEZE CEMENT	FINAL BPM	
			<input type="checkbox"/> ACID BREAKDOWN	MINIMUM BPM	
			<input type="checkbox"/> ACID STIMULATION	MAXIMUM BPM	
			<input type="checkbox"/> ACID SPOTTING	AVERAGE BPM	
			<input type="checkbox"/> MISC PUMP		
			<input type="checkbox"/> OTHER	HYD HHP = RATE X PRESSURE X 40.8	

PRESSURE SUMMARY			
BREAKDOWN or CIRCULATING psi	AVERAGE psi		
FINAL DISPLACEMENT psi	ISIP psi		
ANNULUS psi	5 MIN SIP psi		
MAXIMUM psi	15 MIN SIP psi		
MINIMUM psi			

INSTRUCTIONS PRIOR TO JOB Rig up, Safety meeting, psi test, Circ 40 bbls of H₂O w/ 2nd low 10oz Dye, mix + pump 295 sks of cement @ 30% Excess @ 152 1/2 lb / 1.27 yield, or until stopped by Co man, Drop Plug Displace 41 bbls of H₂O Bump Plug @ 150 psi over lift psi wait 5 min Release psi wash up Rig Down

Arrival w 700 sks of cement 29 lb KCL 32oz Dye 66.7 bbls of Slurry H₂O test ok

JOB SUMMARY

DESCRIPTION OF JOB EVENTS Safety meeting 3:21 AM Circ 3:33 AM Cement 3:42 AM
Drop Plug 4:10 AM Displace 4:10 AM

10 bbls	6.0/m	410 psi	4:13 AM	Used 435 sks of cement 91% Excess 98.3 bbls of Slurry
20 bbls	6.0/m	460 psi	4:15 AM	
30 bbls	6.0/m	500 psi	4:17 AM	
40 bbls	1.0/m	260 psi	4:19 AM	
41 bbls	1.0/m	240 psi	4:21 AM	
Bump Plug		400 psi	4:21 AM	

Left w 265 sks of cement 19 lb KCL 22oz Dye 5 bbls of Slurry back

2-7-11

AUTHORIZATION TO PROCEED

TITLE

DATE

Customers hereby acknowledges and specifically agrees to the terms and conditions on this work order, including, without limitation, the provisions on the reverse side hereof which include the release and indemnity.