

BISON OIL WELL CEMENTING, INC.



1736 Wynkoop St., Ste. 100
Denver, Colorado 80202
Phone 303-296-3010
Fax 303-296-8143
E-mail: bisonoil@qwestoffice.net

REF. INVOICE # 9008

LOCATION Hwy 66-19

FOREMAN Kirk Kallhoff
Mike R Mike D. Mike S

TREATMENT REPORT

DATE 5-24-10	WELL NAME Horse Iron P21-21D	SECTION Z1	TWP 3N	R1E 67W	COUNTY Weld	FORMATION
CHANGE TO Noble		OWNER				
MAILING ADDRESS		OPERATOR Noble				
CITY		CONTRACTOR Ensign 136				
STATE ZIP CODE		DISTANCE TO LOCATION				
TIME ARRIVED ON LOCATION 8:30pm		TIME LEFT LOCATION 11:30pm				

WELL DATA			PRESSURE LIMITATIONS		
HOLE SIZE 12 1/4	TUBING SIZE	PERFORATIONS	THEORETICAL		INSTRUCTED
TOTAL DEPTH 535.02	TUBING DEPTH	SHOTS/FT	SURFACE PIPE AVAILABLE LONG		
PBD 480.38	TUBING WEIGHT	OPEN HOLE	STRING		
CASING SIZE 8 7/8	TUBING CONDITION		TUBING		
CASING DEPTH 524.43		TREATMENT VIA	TYPE OF TREATMENT		
CASING WEIGHT 2416	CASING DEPTH		TREATMENT RATE		
CASING CONDITION good			BREAKDOWN BPM		
PRESSURE SUMMARY			INITIAL BPM		
BREAKDOWN CIRCULATING PSI	AVERAGE PSI		FINAL BPM		
FINAL DISPLACEMENT PSI	ISIP PSI		MINIMUM BPM		
ANNULUS PSI	5 MIN SIP PSI		MAXIMUM BPM		
MAXIMUM PSI	15 MIN SIP PSI		AVERAGE BPM		
MINIMUM PSI			H2O IN? RATE X PRESSURE X 40.8		

INSTRUCTIONS PRIOR TO JOB: Rig up, safety meeting, PSI test, circ 30 BBLs H2O 2nd 10' Dye mix Pump
227 SLS cement at 30% Excess at 1.27 yield at 15.2 lbs or until cement stops vis
Release Plug Displace 30.6 BBLs H2O Bump Plug at 150 psi over Lift psi wait 5 min
wash up Rig Down
Arrived w/ 600 SLS cement 4 gallons Red 16oz Dye
51.1 BBLs slurry
H2O tested

JOB SUMMARY
DESCRIPTION OF JOB EVENTS: Safety meeting 9:50pm circ 10:10pm cement 10:16pm
Drop Plug 10:43pm Displace 10:43pm

10 BBLs At 5.5 BBLs/m 10:47pm 460psi
20 BBLs At 5.5 BBLs/m 10:49pm 500psi
30 BBLs At 1.0 BBLs/m 10:54pm 240psi
30.6 BBLs At 1.0 BBLs/m 10:54pm 250psi
Bump Plug 10:54pm 450psi
used 51% Excess per column
used 264 SLS cement
59.4 BBLs slurry

Lfdu 336 SLS cement 3 gallons 1st Red 16oz Dye BBLs Back 9

[Signature]

[Signature]

5-24-10

AUTHORIZATION TO PROCEED

TITLE

DATE