

Frac Details

Well Name: OWL CREEK 8-64-30-1M

Contractor:

GENERAL			TECHNICAL RESULTS		
Date 11/3/2011	Type Fluid Frac	Delivery Mode Casing	Technical Result		Tech Result Details
Min Top Depth (ftKB) 7,465.0	Max Btm Depth (ftKB) 7,466.0	Zone Name	Bottom Hole Pressure Method		Diagnostic Method
PRESSURES			Closure Pressure (psi)		
Breakdown Pressure (psi)	P Pre SI (psi)	Frac Gradient (psi/ft) 0.91	Closure Pressure Method		
Min Treat Pressure (psi)	Max Treat Pressure (psi) 4,982.0	Avg Treat Pressure (psi)	FRAC GEOMETRY		
Instant. Shut-in Pressure (psi) 3,534.0	P Post SI (psi)	Shut-in Time Final (hr)	Frac Length (ft)	Frac Width (ft)	Frac Height (ft)
RATES			COMMENTS		
Min Treat Rate (gpm)	Max Treat Rate (gpm) 109.20	Avg Treat Rate (gpm)	Comment		
POWER			Magnacide treated water		
Avg Pump Power (hp)	Max Pump Power (hp)	Max Pump Rating (hp)			
GAS					
Gas Type	Total Gas Volume (MCF)				
PROPPANTS					
Total Add Amount					
Proppant Designed (lb)	Proppant In Formation (lb)	Proppant In Wellbore (lb)			
Max Additive BH Conc (lb/gal)	Max Additive Surf Conc (lb/gal)	Est Sand Top Depth (ftKB)			
VOLUMES					
Total Clean Volume Pumped... 8.40	Vol Slurry Tot (bbl)	Total Volume Recovered (bbl)			

Pumping Details													
Stg #	Stage Type	P Cas Start (psi)	P Tub Start (psi)	Q Fluid Init (gpm)	Gas Type	Q Gas (ft³/min)	Vol Clean Pump (bbl)	Cum Clean Vol Pumped (bbl)	Vol Slurry (bbl)	Vol Slurry Cum (bbl)	Foam Quality (%)	Stim/Treat Fluid	Com
1	Pump Main Body						8.40	8.40					Magnacide treated water

Frac Details

Well Name: OWL CREEK 8-64-30-1M

Contractor:

GENERAL			TECHNICAL RESULTS		
Date 11/8/2011	Type Fluid Frac	Delivery Mode Casing	Technical Result		Tech Result Details
Min Top Depth (ftKB) 7,369.0	Max Btm Depth (ftKB) 7,370.0	Zone Name	Bottom Hole Pressure Method		Diagnostic Method
PRESSURES			Closure Pressure (psi)		
Breakdown Pressure (psi)	P Pre SI (psi)	Frac Gradient (psi/ft) 1.42	Closure Pressure Method		
Min Treat Pressure (psi)	Max Treat Pressure (psi) 6,524.0	Avg Treat Pressure (psi)	FRAC GEOMETRY		
Instant. Shut-in Pressure (psi) 5,603.0	P Post SI (psi)	Shut-in Time Final (hr)	Frac Length (ft)	Frac Width (ft)	Frac Height (ft)
RATES			COMMENTS		
Min Treat Rate (gpm)	Max Treat Rate (gpm) 113.40	Avg Treat Rate (gpm)	Comment		
POWER			Magnacide treated water		
Avg Pump Power (hp)	Max Pump Power (hp)	Max Pump Rating (hp)			
GAS					
Gas Type	Total Gas Volume (MCF)				
PROPPANTS					
Total Add Amount					
Proppant Designed (lb)	Proppant In Formation (lb)	Proppant In Wellbore (lb)			
Max Additive BH Conc (lb/gal)	Max Additive Surf Conc (lb/gal)	Est Sand Top Depth (ftKB)			
VOLUMES					
Total Clean Volume Pumped... 1.30	Vol Slurry Tot (bbl)	Total Volume Recovered (bbl)			

Pumping Details													
Stg #	Stage Type	P Cas Start (psi)	P Tub Start (psi)	Q Fluid Init (gpm)	Gas Type	Q Gas (ft³/min)	Vol Clean Pump (bbl)	Cum Clean Vol Pumped (bbl)	Vol Slurry (bbl)	Vol Slurry Cum (bbl)	Foam Quality (%)	Stim/Treat Fluid	Com
2	Pump Main Body						1.30	1.30					Magnacide treated water

Frac Details

Well Name: OWL CREEK 8-64-30-1M

Contractor:

GENERAL			TECHNICAL RESULTS		
Date 11/16/2011	Type Fluid Frac	Delivery Mode Casing	Technical Result		Tech Result Details
Min Top Depth (ftKB) 7,283.0	Max Btm Depth (ftKB) 7,284.0	Zone Name	Bottom Hole Pressure Method		Diagnostic Method
PRESSURES			Closure Pressure (psi)		
Breakdown Pressure (psi)	P Pre SI (psi)	Frac Gradient (psi/ft) 0.90	Closure Pressure Method		
Min Treat Pressure (psi)	Max Treat Pressure (psi) 5,871.0	Avg Treat Pressure (psi)	FRAC GEOMETRY		
Instant. Shut-in Pressure (psi) 3,371.0	P Post SI (psi)	Shut-in Time Final (hr)	Frac Length (ft)	Frac Width (ft)	Frac Height (ft)
RATES			COMMENTS		
Min Treat Rate (gpm)	Max Treat Rate (gpm) 92.40	Avg Treat Rate (gpm)	Comment		
POWER			Magnacide treated water		
Avg Pump Power (hp)	Max Pump Power (hp)	Max Pump Rating (hp)			
GAS					
Gas Type	Total Gas Volume (MCF)				
PROPPANTS					
Total Add Amount					
Proppant Designed (lb)	Proppant In Formation (lb)	Proppant In Wellbore (lb)			
Max Additive BH Conc (lb/gal)	Max Additive Surf Conc (lb/gal)	Est Sand Top Depth (ftKB)			
VOLUMES					
Total Clean Volume Pumped... 5.00	Vol Slurry Tot (bbl)	Total Volume Recovered (bbl)			

Pumping Details													
Stg #	Stage Type	P Cas Start (psi)	P Tub Start (psi)	Q Fluid Init (gpm)	Gas Type	Q Gas (ft³/min)	Vol Clean Pump (bbl)	Cum Clean Vol Pumped (bbl)	Vol Slurry (bbl)	Vol Slurry Cum (bbl)	Foam Quality (%)	Stim/Treat Fluid	Com
3	Pump Main Body						5.00	5.00					Magnacide treated water

Frac Details

Well Name: OWL CREEK 8-64-30-1M

Contractor:

GENERAL			TECHNICAL RESULTS		
Date 11/22/2011	Type Fluid Frac	Delivery Mode Casing	Technical Result		Tech Result Details
Min Top Depth (ftKB) 7,204.0	Max Btm Depth (ftKB) 7,205.0	Zone Name	Bottom Hole Pressure Method		Diagnostic Method
PRESSURES			Closure Pressure (psi)		
Breakdown Pressure (psi)	P Pre SI (psi)	Frac Gradient (psi/ft) 1.91	Closure Pressure Method		
Min Treat Pressure (psi)	Max Treat Pressure (psi) 5,082.0	Avg Treat Pressure (psi)	FRAC GEOMETRY		
Instant. Shut-in Pressure (psi) 4,721.0	P Post SI (psi)	Shut-in Time Final (hr)	Frac Length (ft)	Frac Width (ft)	Frac Height (ft)
RATES			COMMENTS		
Min Treat Rate (gpm)	Max Treat Rate (gpm) 100.80	Avg Treat Rate (gpm)	Comment		
POWER			Magnacide treated water		
Avg Pump Power (hp)	Max Pump Power (hp)	Max Pump Rating (hp)			
GAS					
Gas Type	Total Gas Volume (MCF)				
PROPPANTS					
Total Add Amount					
Proppant Designed (lb)	Proppant In Formation (lb)	Proppant In Wellbore (lb)			
Max Additive BH Conc (lb/gal)	Max Additive Surf Conc (lb/gal)	Est Sand Top Depth (ftKB)			
VOLUMES					
Total Clean Volume Pumped... 6.00	Vol Slurry Tot (bbl)	Total Volume Recovered (bbl)			

Pumping Details													
Stg #	Stage Type	P Cas Start (psi)	P Tub Start (psi)	Q Fluid Init (gpm)	Gas Type	Q Gas (ft³/min)	Vol Clean Pump (bbl)	Cum Clean Vol Pumped (bbl)	Vol Slurry (bbl)	Vol Slurry Cum (bbl)	Foam Quality (%)	Stim/Treat Fluid	Com
4	Pump Main Body						6.00	6.00					Magnacide treated water

Frac Details

Well Name: OWL CREEK 8-64-30-1M

Contractor:

GENERAL			TECHNICAL RESULTS		
Date 11/29/2011	Type Fluid Frac	Delivery Mode Casing	Technical Result		Tech Result Details
Min Top Depth (ftKB) 7,092.0	Max Btm Depth (ftKB) 7,093.0	Zone Name	Bottom Hole Pressure Method		Diagnostic Method
PRESSURES			Closure Pressure (psi)		Closure Pressure Method
Breakdown Pressure (psi)	P Pre SI (psi)	Frac Gradient (psi/ft) 0.90	FRAC GEOMETRY		
Min Treat Pressure (psi)	Max Treat Pressure (psi) 4,515.0	Avg Treat Pressure (psi)	Frac Length (ft)	Frac Width (ft)	Frac Height (ft)
Instant. Shut-in Pressure (psi) 3,300.0	P Post SI (psi)	Shut-in Time Final (hr)	COMMENTS		
RATES			Comment Magnacide treated water		
Min Treat Rate (gpm)	Max Treat Rate (gpm) 100.80	Avg Treat Rate (gpm)			
POWER					
Avg Pump Power (hp)	Max Pump Power (hp)	Max Pump Rating (hp)			
GAS					
Gas Type	Total Gas Volume (MCF)		Fluid Additives		
PROPPANTS			Add		
Total Add Amount			Amount		
			Units		
Proppant Designed (lb)	Proppant In Formation (lb)	Proppant In Wellbore (lb)	Conc (%)		
Max Additive BH Conc (lb/gal)	Max Additive Surf Conc (lb/gal)	Est Sand Top Depth (ftKB)			
VOLUMES					
Total Clean Volume Pumped... 5.30	Vol Slurry Tot (bbl)	Total Volume Recovered (bbl)			

Pumping Details													
Stg #	Stage Type	P Cas Start (psi)	P Tub Start (psi)	Q Fluid Init (gpm)	Gas Type	Q Gas (ft³/min)	Vol Clean Pump (bbl)	Cum Clean Vol Pumped (bbl)	Vol Slurry (bbl)	Vol Slurry Cum (bbl)	Foam Quality (%)	Stim/Treat Fluid	Com
5	Pump Main Body						5.30	5.30					Magnacide treated water

Frac Details

Well Name: OWL CREEK 8-64-30-1M

Contractor:

GENERAL			TECHNICAL RESULTS		
Date 12/6/2011	Type Fluid Frac	Delivery Mode Casing	Technical Result		Tech Result Details
Min Top Depth (ftKB) 7,050.0	Max Btm Depth (ftKB) 7,051.0	Zone Name	Bottom Hole Pressure Method		Diagnostic Method
PRESSURES			Closure Pressure (psi)		
Breakdown Pressure (psi)	P Pre SI (psi)	Frac Gradient (psi/ft) 0.97	Closure Pressure Method		
Min Treat Pressure (psi)	Max Treat Pressure (psi) 5,612.0	Avg Treat Pressure (psi)	FRAC GEOMETRY		
Instant. Shut-in Pressure (psi) 3,772.0	P Post SI (psi)	Shut-in Time Final (hr)	Frac Length (ft)	Frac Width (ft)	Frac Height (ft)
RATES			COMMENTS		
Min Treat Rate (gpm)	Max Treat Rate (gpm) 117.60	Avg Treat Rate (gpm)	Comment		
POWER			Magnacide treated water		
Avg Pump Power (hp)	Max Pump Power (hp)	Max Pump Rating (hp)			
GAS					
Gas Type	Total Gas Volume (MCF)				
PROPPANTS					
Total Add Amount					
Proppant Designed (lb)	Proppant In Formation (lb)	Proppant In Wellbore (lb)			
Max Additive BH Conc (lb/gal)	Max Additive Surf Conc (lb/gal)	Est Sand Top Depth (ftKB)			
VOLUMES					
Total Clean Volume Pumped...	Vol Slurry Tot (bbl)	Total Volume Recovered (bbl)			
10.75					

Pumping Details													
Stg #	Stage Type	P Cas Start (psi)	P Tub Start (psi)	Q Fluid Init (gpm)	Gas Type	Q Gas (ft³/min)	Vol Clean Pump (bbl)	Cum Clean Vol Pumped (bbl)	Vol Slurry (bbl)	Vol Slurry Cum (bbl)	Foam Quality (%)	Stim/Treat Fluid	Com
6	Pump Main Body						10.75	10.75					Magnacide treated water