Submit 3 Collection Affirm Hall Detrice	State of New Me Energy, Minerals and Natura			Form C-103		
District I	June 19, 2008 WELL API NO. 30-025-06826					
District II (-) (-) (-) 7 9 2008	OOI / LOOO OILLONGIN ALIUN IN VISION					
	1301 W Grand Ave., Artesia, NM 88210					
District III 1000 Rio Prazos Rdi Azre NM 874 M District IV 1220 S St Francis Dr , Santa Fe, NM 87505	6. State Oil & Gas Lease N	0.				
SUNDRY NOTICES	7. Lease Name or Unit					
(DO NOT USE THIS FORM FOR PROPOSALS OF THE PROPOSALS OF T	Agreement Name 'W. S. Marshall B'					
PROPOSALS)  1. Type of Well: Oil Well  Gas	8. Well Number					
2. Name of Operator			9. OGRID Number			
Marathon Oil Company 3. Address of Operator			14021 10. Pool name or Wildcat			
P.O Box 3487 Houston, TX 77253-3	3487 <u>Mail Stop</u>	#3308	Penrose Skelly Grayburg			
4. Well Location		·				
Unit Letter K : 2310' feet from	the <b>South</b> line and <b>1650</b> '	feet from the W	est line			
Section 27 Township 21-S			y <u>Lea</u>			
	Elevation (Show whether DR, KB: 3425',		c.)			
12. Check Appro	opriate Box to Indicate N	ature of Notice	, Report or Other Data			
NOTICE OF INTEN	ITION TO:	SU	BSEQUENT REPORT	ΩF·		
TEMPORARILY ABANDON	RILLING OPNS.□ P AND A	\				
	LTIPLE COMPL	CASING/CEME	NT JOB			
DOWNHOLE COMMINGLE						
OTHER:	П	OTHER: Plug b	ack Blinebry & Abo / Re-com	plete to GB ⊠		
13. Describe proposed or completed of starting any proposed work). So or recompletion.	operations. (Clearly state all p SEE RULE 1103. For Multipl	ertinent details, a e Completions: A	nd give pertinent dates, includi attach wellbore diagram of prop	ng estimated date cosed completion		
*Marathon Oil Company has con Marshall B, #9 in the Blinebry a the Penrose Skelly Grayburg for of the well work done.	nd Abo formations, and	l re-complete	the well to			
*NOTE: No inground activity, fresh wate Discussed with Buddy Hill at 'N	r used, no solids or waste gene MOCD' and determined Forn	erated, and Key En n C-144, not requi	nergy Services trucked liquid to red for this application.	oʻSWDʻ.		
Spud Date: 6/ 12/1951	Rig Release D	ate:	7/26/2008			
I hereby certify that the information above	is true and complete to the be	st of my knowled	ge and belief.			
SIGNATURE <b>Rick R.</b>	TITLE: Regulator	y Compliance Rep	. DATE: <u>08-OCT-2008</u>	i		
Type or print name Rick R. Schell	E-mail address <u>rrschell@</u>	MarathonOil.com	PHONE: <u>713-296-3412</u>			
For State Use Only		um engineer	DATE 0CT 3 1 2008	3		
APPROVED BY: Conditions of Approval (if any):	TITLE		DATE UCI OI LOUG	,		
2A Blinebry 6:1	a Want	a Abo				

# **Recompletion Procedure**

W.S. Marshall Well No. 9 2310' FSL, 1650' FWL Section 27, 21S-37E Lea County, New Mexico

WBS NO:

RW.08.17691.CAP.CMP

Date:

June 3, 2008

**Purpose:** 

Recomplete to Grayburg

**Elevation:** 

KB: 3425' **PBTD:** 7320'

3412' GL:

TD: 7588'

Estimated Cost: \$355,000

**WI:** 100%

**NRI**: 87.5%

**Surface Casing:** 

13-3/8", 48#, H-40 set at 308'. Cemented w/ 300 sx. TOC @?

Intermediate Casing: 8-5/8", 32#, J-55 set at 2800'. Cemented w/1200 sx. TOC @?

**Production Casing:** 

5-1/2", 17#, J-55 set at 7500'. Cemented with 1100 sx. Top of good cmt

@ 3200' (CBL).

**Production Tubing:** 

2-3/8", 4.7#, J-55, EUE. EOT @ 7130'.

Reservoir Pressure:

Expected Pressure ~ <1630 psi

**Open Perforations:** 

5484'- 5917'; 6765'-7086'

**SQZ Perforations:** 

5125-65', 7143-7205', 7245-70'

**Safety Issues:** 

H2S gas likely to be present

### **Tubular Performance/Capacities:**

	ID (in.)	Drift (in.)	Burst* (psi)	Collapse (psi)	Capacity (bbl/ft)
2-3/8" 4.7 # J-55	1.995	1.901	6160	8100	.00387
5-1/2" 17# J-55	4.892	4.767	4256	4910	.0232
Tbg/Csg Annulus					.0178

## RECOMPLETION PROCEDURE W.S. Marshall Well No. 9 Lea County, New Mexico

### **Procedure:**

- 1. Use fresh water as workover fluid.
- 2. RU WSU. Kill well with fresh water. Unseat pump POOH w/ Rods and pump. Unflange well head, release TAC. Install and test BOPE. POOH Stand Back 2-3/8" Tbg.
- 3. RIH with cast iron bridge plug (CIBP). Set CIBP at ±/-5100. Circulate wellbore full w/freshwater and test to 2000 psi. PU end of tubing to 3850' and circulate a balance 4.3 bbl slug of acid from 3850' to 3665' using 7-1/2" NEFEHCL inhibited for 48-hours at 125 deg F. POOH with tubing and tools.

#### 4. Perforate:

RU Baker-Atlas electric line with pack-off.. For depth control, use McCullough GRL dated 1-12-1960. RU and test pack-off to 1000 psi. RIH with 3-1/8" slick guns loaded with 311T charges at 1 SPF and perforate 50 feet with 50 holes as follows. (It is desired to perforate from top down to maximize acid in wellbore):

```
3680-90 (10', 10 holes)
3700-10 (10', 10 holes)
3737-42 (5', 5 holes)
3765-70 (5', 5 holes)
3810-20 (10', 10 holes)
3825-30 (5', 5 holes)
3844-49 (5', 5 holes)
```

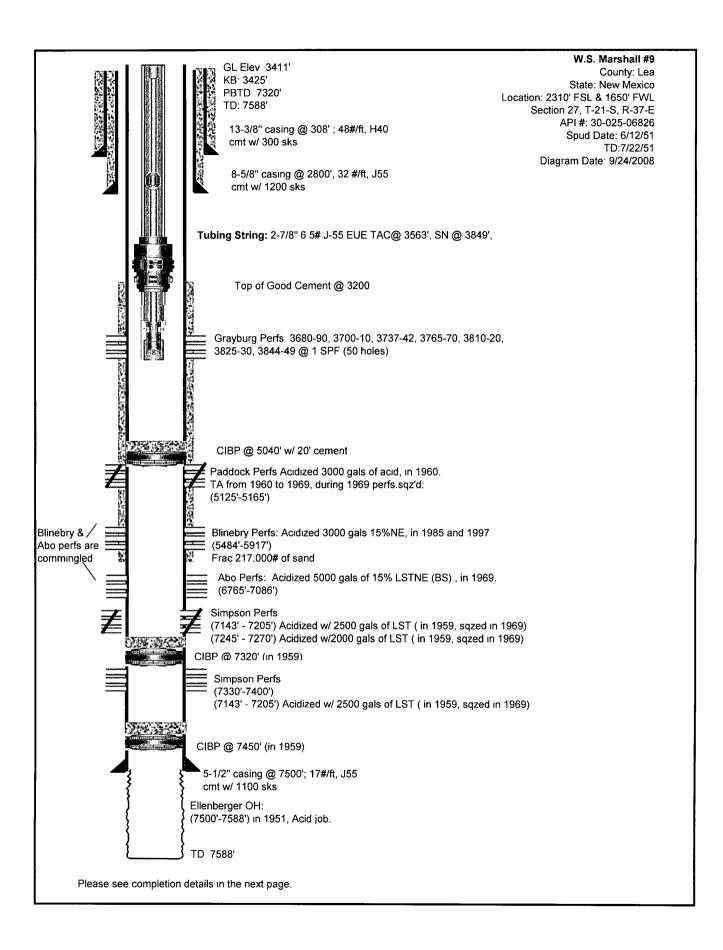
50 Net Feet - 50 Holes

After last gun has been shot, tag CIBP at 5100' and verify setting depth of CIBP. Dump 1 bailer of cement on CIBP. Pump 5 bbls of fresh water down casing to flush excess acid.

RD Baker-Atlas.

Casing collars at: 3629', 3673', 3712', 3755', 3796', 3837', 3879'. With short joints @ 3505 -3464-3424'.

- 5. Frac per Halliburton design.
  - 156,182 # 20/40 brown sand
  - Five (5) 500-bbl frac tanks w/ freshwater
  - Pump down casing at 55 BPM w/ treesaver
  - Use expedite on all sand
  - Displace with 95% of casing capacity to top perf (80 bbls)
  - Start flush when 2 ppg below max concentration
- 6. RD Halliburton equipment and tree saver.
- 7. RIH with 2-3/8" tubing and 4-3/4" bit and clean-out sand to 5100'. Reverse circulate well until clean returns. POOH laying down 2-3/8" TBG. Obtain 4000' of 2 7/8" 6.5# J-55 EUE TBG.
- 8. RIH with 4000' of 2-7/8" production equipment to produce Grayburg only. Remove BOP. Install wellhead. Set pump intake below lower perfs. Set TAC above top perforation. Install rods and pump. PWOP. Design pump to move upwards of 300 BWPD.



# Marathon Oil Company

# Operations Summary Report

Legal Well Name:

W S MARSHALL B NO 9

Event Name:

Common Well Name: W S MARSHALL B NO 9

RECOMPLETION

Start:

2/5/2008

Spud Date: End: 7/26/2008

Group:

Contractor Name: Rig Name:

KEY ENERGY SERVICES KEY ENERGY SERVICES

Rig Release: 7/26/2008 Rig Number: 174

Rig Name:	t	KEY EN	ERGY S	EKVIC	E2	Rig Number: 174
Date	From - To	Hours	Code	Sub Code	Phâse	Description of Operations
7/17/2008	15:00 - 18:00	3 00	PUMP	ACID	CMPPUL	Pumped 5 bbls of 7 1/2% NEFE HCL and pooh w/ tbg, setting tool. Left acid on spot.
	18:00 - 18·30	0 50	SECURE	WELL	CMPPUL	SW, SDFN.
7/18/2008	06:30 - 07.00	0.50	SAFETY	MTG_	CMPPUL	Safety Meeting. Rig up Baker Atlas Perforating Equipment
	07:00 - 08:00	1.00	TEST	EQUI	PERF	Assemble 3-1/8" Slick Gun Carrier w/ 311T w/ 23 gram Charges w/ 1 JSPF, w/ Collar Locator PU pack off and tested to 1000 psi. Held Pressure.
	08:00 - 13.00	5.00	PERF	WLNC	PERF	First 2 runs were no fires. Arm and PU Perforating Gun. RIH w/ 3-1/8" 28' Slick Gun Carrier w/ 311T w/ 23 gram Charges w/ 1 JSPF, w/ Collar Locator. Get on Depth. Perforate f/ 3680 - 90', 3700-10' & 3737 - 42' @ 1 SPF, all shots fired. POOH with Wire Line. Rbih w/ 34' gun #2, and shot from 3765 - 70' - 3810 - 20' & 3825 - 30' & 3844 - 49' @ 1 SPF, all shots fired. Rih cement bailer, tag CIBP @ 5040'. TOC @ 5020'. Total of 50 holes 50 net ft. RD Baker Atlas.
	13:00 - 18:00	5.00	RUNPUL	TBG_	CMPPUL	RD floor and tongs. Broke down perfs @ 1200 psi Pump in rate of 2 bpm @ 800 psi. ISIP @ 800 psi. Drop to 0 psi in 5 min.
	18.00 - 18:30	0.50	PERF	RURD	PERF	SDFN.
7/23/2008	07:00 - 07:30	0.50	SAFETY	MTG_	CMPSTM	Held Safety Meeting
	07:30 - 12:00	4.50	RURD	STIM	CMPSTM	Rig up Haliburton Tree Saver. Wait on HHP, Rig up Halliburton Sand Fracturing Equipment. Open intermediate & surf casing. Monitor during job. Test lines to 5000 psi.
	12:00 - 17:00	5.00	PUMP	FRAC	CMPSTM	Van lost power. Waited for another one from the Hobbs yard Start Pumping Frac Job. Pumped 83 bls of 7 1/2% Acid, Pumped 1921 bls cross linked Gel Pad, 1-5 PPG 20/40 Sand - Premium Brown, totaling 137,663 lbs. Pumped Expedite in all sand down 5-1/2" casing. Pumped 81 bbls Flush liner gel. Average BH Treating Rate was 53 bpm and average WH Psi was 1779 psi. ISDP = 1436 psi. 5min=1382 psi 10min=1371 psi. 15min=1363 psi. Bleed off Surface line Pressure
	17:00 - 19:30	2.50	RURD_	STIM	CMPSTM	RD Tree Saver. Shut BOPE blind rams. Rig down Halliburton Frac Equipment. Total Load to Recover = 2085 bbls liquid to recover.
	19:30 - 20 00	0.50	SECURE	WELL	CMPSTM	Shut-in and Secure Well. SDFN
7/24/2008	06.00 - 07 30		SAFETY		CMPRUN	Held Safety Meeting. Check Well Pressure Casing had 0 psi.
	07:30 - 14.00	6.50	RUNPUL	TBG_	CLNOUT	RIH w/ 4 3/4" bit and 162 Jts 2-7/8" Tubing. Tag Top of sand Fill @ 4967'. 1100' of rathole below bottom perf @ 3849'. No cleanout needed. Pooh laying down all of the 2 3/8 J-55. Unloaded and racked new 2 7/8" J-55 tubing. Tallied pipe.
	14:00 - 18:00	4.00	TEST	TBG_	RODOP	RU hydrotesters to test in the hole. Rih w/ 2 jts 2 7/8", SN, 1 - alloy jt, 8 jts 2 7/8, TAC, & 50 jts 2 7/8". Shut down for night. Finish testing in w/ rest of tbg in AM.
	18:00 - 18·30	0.50	SECURE	WELL	RODOP	Shut-in and Secure Well. SDFN
7/25/2008	06:00 - 07:30	1	SAFETY	_	RODOP	Held Safety Meeting. RU testers. Open Well up.
	07:30 - 11:30	4.00	RUNPUL	TBG_	RODOP	Tested in the hole w/ the last 62 jts 2-7/8". Tested Good. Total of 121 Jts above Seating Nipple. TAC @ 3563'. Seating Nipple @ 3849' and Bottom of Tubing @ 3913'. TAC 117' above top perforation set in 15 pts Tension, Seating Nipple 0' below bottom perforation. Bottom of open ended tbg is 1063' off bottom. PBTD (4967' top of sand), (CIBP @ 5033' by tbg tally). Grayburg perfs @ 3680' - 3849'.
	11:30 - 12:30	1.00	NUND	BOPE	RODOP	Remove BOPE. Set TAC in 10 pts Tension Install Well Head. Change out
	12 30 - 18 00	5 50	RUNPUL	RODS	RODOP	equipment to run Rods.  Pick up new rods, put on cplgs and rih w/ 2.00" RWBC pump w/ strainer nipple, 10 - 1.0" KD's, 100 - 7/8" KD's, 43 - 1.0" KD's, and 1 25" x 26' PR w/ 1.50"x16' Liner Hung well on L&T to 1000#. Held good w/ good pump action. Left well down til AM

# Marathon Oil Company

Page 3 of 3

# **Operations Summary Report**

Legal Well Name:

W S MARSHALL B NO 9

Event Name:

From - To

18:00 - 18.30

06:30 - 08.00

Common Well Name: W S MARSHALL B NO 9

RECOMPLETION

Hours Code

Start:

Spud Date:

End:

7/26/2008 Group:

Contractor Name:

KEY ENERGY SERVICES

Rig Release: 7/26/2008

Rig Number: 174

Rig Name: ⊸Date\*

7/25/2008

7/26/2008

KEY ENERGY SERVICES

0.50 SECURE WELL

1.50 SAFETY MTG\_

Sub Code

Phase

RODOP

CMPRUN

(Well head flange is 2 7/8 - 6" - 900) 5 1/2" csg -15.5#

2/5/2008

Held Safety meeting. Clean and Inspect Location.

RDMO Pulling Unit. RDMO Reverse Unit Well pumping to facility.

Description of Operations

3.50 RURD\_\_\_RIG\_ **RDMO** 08:00 - 11.30

Printed 9/30/2008 12 50 01 PM

## Well history

Year	Formation		Perforat	iono	Perf.	Ctimudation
1951	Ellenberge		renorac	10115	Density	Stimulation
	Simpson	7330	to	7400	2 spf	1-) Acid
,,,,,	Girripsori	7143	to	7205	2 3pi	2-) Acid
		7245	to	7270		3-) Acid.
1960	Upper	5125	to	5165	160 holes	
,,,,,	Paddock	3723	10	3103	4SPF	Acid
1969	Abo	6765			43/ /	4-) Acid
7505	/ 100	6780				T) Acid
		6786				
		6805				
		6812				
		6844				
		6855				
1		6863				
		6884				
		6908				
		6914				
		6925				•
		6958				
		6978				
		6994				
		7012				
		7054				
		7072				
		7072				
1985	Blinebry	5652				5- ) Acid
,,,,,	Billicory	5655				J- ) ACIU
		5679			]	
		5692			1	
		5699			İ	
		5717			ĺ	
		5721				
		5744				
		5757				
		5782				
		5790				
		5810				
		5831				
		5843				
		5873				
		5881				
		5892				
		5899				
		5917				
1997	Blinebry	5484	to	5512	2 spf	6-) Acid and
		5418	to	5438		frac.
		5444	to	5450		
		5458	to	5468		
		5476	to	5486		
		5492	to	5498		
		5604	to	5614		
		5643	to	5656		
		5664	to	5680 5703		i
		5690 5610	to	5702 5730		
		5610	to	5720 5700		
		5680 5802	to	5790 5911		
			to	5811		
		5822	to	5832		