

District I

1625 N French Dr, Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Road, Aztec, NM 87410

District IV

1220 S St Francis Dr, Santa Fe, NM 87503

State of New Mexico

Minerals and Natural Resources

Form C-101

June 16, 2008

RECEIVED

JUL 02 2009

HOBBSOCD

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

## APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

<sup>1</sup> Operator Name and Address Marshall & Winston Inc. P.O. Box 5088 Midland, TX 79710-0880		<sup>2</sup> OGRID Number 014187
<sup>3</sup> Property Code 37244	<sup>4</sup> Property Name Medlin Ranch West Abo-Wolfcamp	<sup>5</sup> API Number 30 - 005-29097
<sup>9</sup> Proposed Pool 1 Wildcat		<sup>10</sup> Proposed Pool 2 Well No 1H

## 7 Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North	Feet from the	West	County
C	8	15-S	31-E		330		2310		Chaves

## 8 Proposed Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North	Feet from the	East	County
B	7	15-S	31-E		500		2310		Chaves

## Additional Well Information

<sup>11</sup> Work Type Code New Well	<sup>12</sup> Well Type Code Oil	<sup>13</sup> Cable/Rotary Rotary	<sup>14</sup> Lease Type Code Fee	<sup>15</sup> Ground Level Elevation 4,445 ft.
<sup>16</sup> Multiple Abo-Wolfcamp	<sup>17</sup> Proposed Depth 8,730 ft	<sup>18</sup> Formation Abo-Wolfcamp	<sup>19</sup> Contractor Patriot Drilling	<sup>20</sup> Spud Date ASAP ( 7/2009)

## 21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17.500	13.375	48	340	380	surface
12.250	9.625	32.3	3950	1065	Surface
8.750	7.000	32	9130	685	3450
6.125	4.500	11.6	13.207	620	8980

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

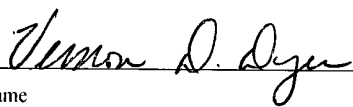
Marshall & Winston Incorporated plans to drill a horizontal well as follows. First drill the vertical wellbore to 9100 ft, plug back and kick off at an estimated 8,390 ft. Then drill the directional portion at an estimated build of 16.85 degrees/ 100ft. and TD at 8,924 ft MD (8,730 ft TVD). The horizontal wellbore will begin at this point with the anticipated length of 4,623 ft. and a TD location of 500ft FNL, 2310 ft. FEL in sec. 7, T 15S, R.31 E. The expected producing zone shall be in the lower Abo and upper Wolfcamp formations known as the Medlin Ranch West Abo-Wolfcamp pool.

A 5,000 psi BOP equipment stack shall be installed on the surface casing and operated according to the NMOCD rules. All equipment and connections above the bradenhead or casing head shall have a working pressure of 5,000 psi minimum. The BOPE shall include an automatic accumulator, Kelly cock, an Annular and double ram system.

A closed loop circulating system will be used and the C-144 shall be submitted.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature



Printed name

Vernon D. Dyer

Title

Agent

E-mail Address

vdyerol@cableone.net

Date

7-2-2009

Phone

(575) 420-0355

## OIL CONSERVATION DIVISION

Approved by:



Title

PETROLEUM ENGINEER

Approval Date:

Expiration Date.

JUL 14 2009

Conditions of Approval Attached ☐

Permit Expires 2 Years From Approval Date Unless Drilling Underway

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102

DISTRICT II  
1301 W. GRAND AVENUE, ARTESIA, NM 88210

RECEIVED

OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

JUL 02 2009

DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

HOBBS

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-005-29097	Pool Code 97722	Pool Name Wildcat Abo Wolfcamp
Property Code 37744	Property Name MEDLIN FEE (8)	Well Number 1H
OGRID No. 14187	Operator Name MARSHALL & WINSTON, INC.	Elevation 4445'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	8	15-S	31-E		330	NORTH	2310	WEST	CHAVES

Bottom Hole Location If Different From Surface

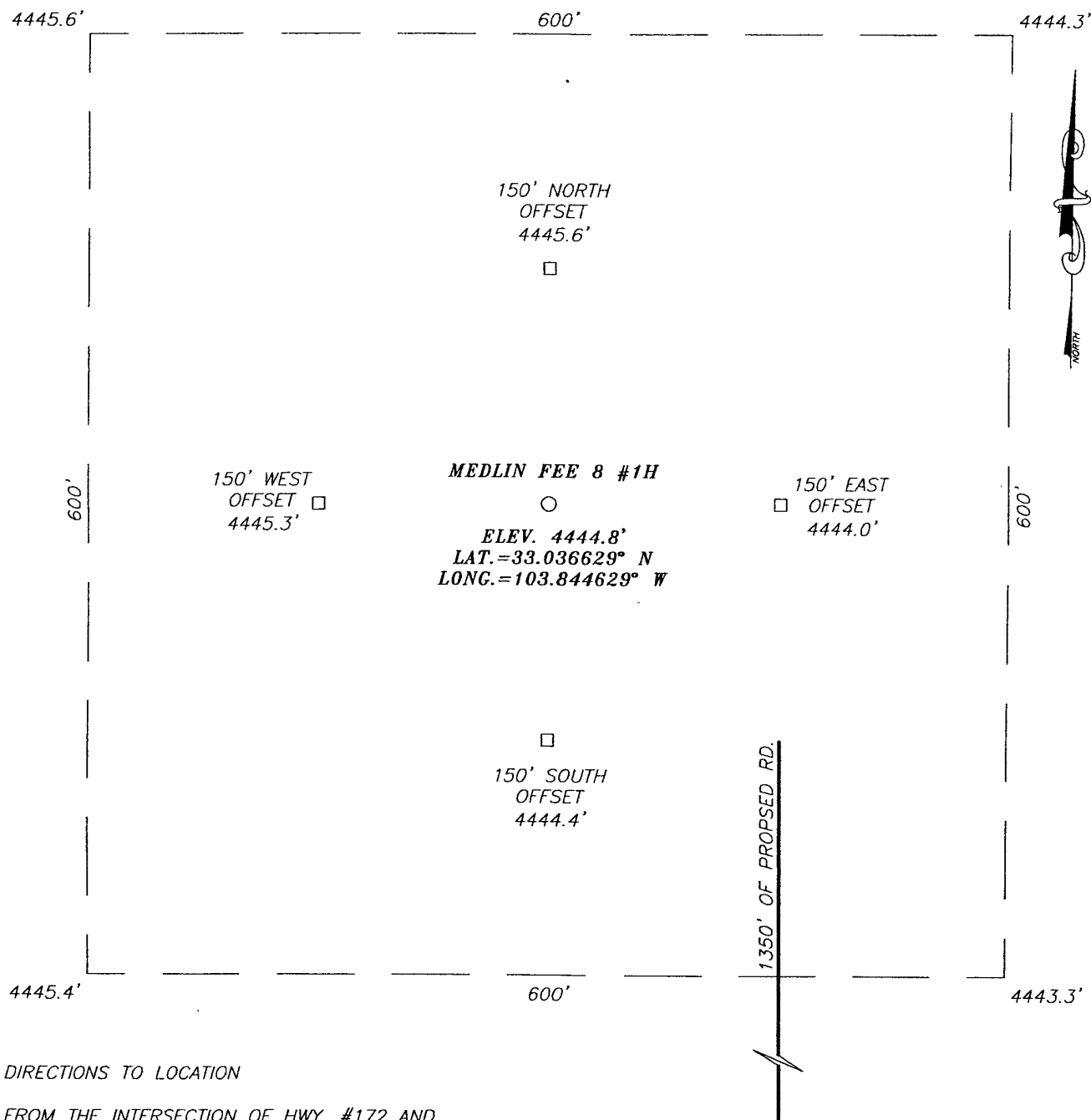
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	7	15-S	31-E		500	NORTH	2310	EAST	CHAVES

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

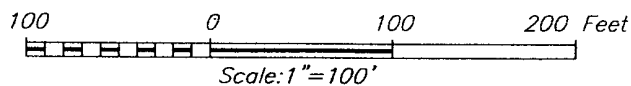
<p>BOTTOM HOLE LOCATION</p> <p>Y=740998.0 N X=645149.2 E</p> <p>GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=741187.2 N X=649767.4 E</p> <p>LAT.=33.036629° N LONG.=103.844629° W</p> <p>SCALE: 1"=2000'</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Signature: <i>Vernon D. Dyer</i> Date: 7-2-09 Printed Name: VERNON D. DYER</p> <p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>Date Surveyed: JUNE 11, 2009 AR Signature &amp; Seal of Professional Surveyor: <i>Ronald J. Eidson</i> Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>
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SECTION 8, TOWNSHIP 15 SOUTH, RANGE 31 EAST, N.M.P.M.,  
CHAVES COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HWY. #172 AND  
HWY. #249, GO WEST ON HWY. #249 APPROX.  
3.0 MILES. TURN RIGHT AND GO NORTH APPROX.  
1.1 MILE TO A PROPOSED ROAD SURVEY FOR THE  
MEDLIN FEE 8 #2H WELL. FOLLOW ROAD SURVEY  
NORTH APPROX. 439 FEET TO THE #2H PAD FROM  
THE NORTHEAST CORNER OF PAD. FOLLOW ROAD  
SURVEY 1508 FEET TO THE #1H.



**MARSHALL & WINSTON, INC.**

MEDLIN FEE 8 #1H WELL  
LOCATED 330 FEET FROM THE NORTH LINE  
AND 2310 FEET FROM THE WEST LINE OF SECTION 8,  
TOWNSHIP 15 SOUTH, RANGE 31 EAST, N.M.P.M.,  
CHAVES COUNTY, NEW MEXICO.

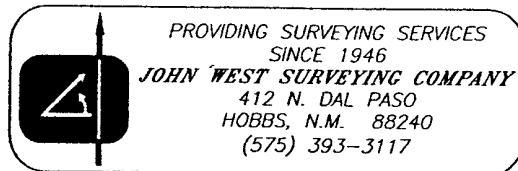
Survey Date: 6/11/09		Sheet 1 of 1 Sheets	
W.O. Number: 09.11.0532		Dr By: AR	Rev 1:N/A
Date: 6/15/09	Disk:	09110532	Scale: 1"=100'

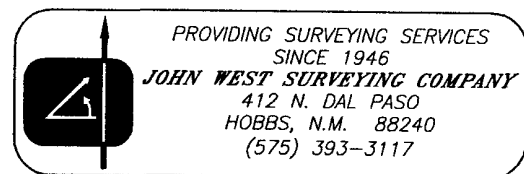


PROVIDING SURVEYING SERVICES  
SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
412 N. DAL PASO  
HOBBS, N.M. 88240  
(575) 393-3117

A detailed topographic map of a region in Texas, showing a grid of townships and ranges. The map includes labels for "MEDLIN FEE 8 #1H" in a central box, "SHIFTING SAND" in the upper center, and "STORAGE TANKS" on the left. It also shows "PUMPING STA.", "FIELD", "COWBOY", "RADIO TOWERS", and "FAS 1242". The map is bounded by "R.30 E" and "R.31 E" at the bottom, and "T.1" and "T.1E" on the right. A scale bar at the bottom right indicates "1/4 Sec US 82".

SEC. 8 TWP. 15-S RGE. 31-E  
SURVEY \_\_\_\_\_ N.M.P.M. \_\_\_\_\_  
COUNTY CHAVES STATE NEW MEXICO  
DESCRIPTION 330' FNL & 2310' FWL  
ELEVATION \_\_\_\_\_ 4445' \_\_\_\_\_  
OPERATOR \_\_\_\_\_ MARSHALL & WINSTON, INC. \_\_\_\_\_  
LEASE \_\_\_\_\_ MEDLIN FEE 8 \_\_\_\_\_







**Proposal No: 556450798A**

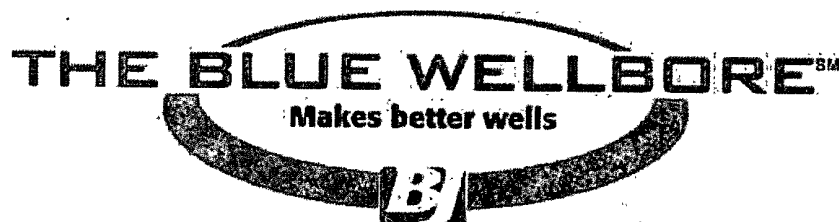
**Marshall & Winston, Inc.**  
**Medlin Fee 8-1H**

Chaves County, New Mexico  
June 25, 2009

**Well Proposal**

**Prepared for:**  
Mr. Gabe Herrera

**Prepared by:**  
Michael Beggs  
Region Engineer  
Midland, Texas



**Service Point:**  
Artesia  
Bus Phone. (505) 746-3140  
Fax: (505) 746-2293

**Service Representatives:**  
Bubba Sullivan  
Manager, City Sales  
Odessa, Texas

**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 13-3/8" Conductor Casing  
**Date:** June 25, 2009



**Proposal No:** 556450798A

## WELL DATA

### ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
17.500 HOLE	340	340

### SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
13.375	12.715	48	340	340

Float Collar set @ 300 ft  
 Mud Density 8.50 ppg  
 Est. Static Temp. 82 ° F  
 Est. Circ. Temp. 80 ° F

### VOLUME CALCULATIONS

340 ft x 0.6946 cf/ft with 100 % excess = 472.4 cf  
 40 ft x 0.8818 cf/ft with 0 % excess = 35.3 cf (inside pipe)  
**TOTAL SLURRY VOLUME** = 507.6 cf  
 = 90 bbls

TOC = 0 ft

**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 13-3/8" Conductor Casing  
**Date:** June 25, 2009



**Proposal No:** 556450798A

## FLUID SPECIFICATIONS

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Cement Slurry	508	/ 1.3	= 380 sacks Premium Plus C Cement + 0.005 lbs/sack Static Free + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.005 gps FP-6L + 56.2% Fresh Water
Displacement			47.1 bbls Displacement Fluid

## **CEMENT PROPERTIES**

	<b>SLURRY NO. 1</b>
Slurry Weight (ppg)	14.80
Slurry Yield (cf/sack)	1.35
Amount of Mix Water (gps)	6.34
Amount of Mix Fluid (gps)	6.34



**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 13-3/8" Conductor Casing  
**Date:** June 25, 2009



**Proposal No:** 556450798A

### PRICE ESTIMATE

#### Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
715	lbs	Calcium Chloride	287.79
95	lbs	Cello Flake	151.95
1	ea	Cement Plug, Rubber, Top 13-3/8 in	385.00
380	94lbs	Premium Plus C Cement	4,681.60
2	gals	FP-6L	65.45
2	lbs	Static Free	25.06
Product Material Subtotal:			\$5,596.85

#### Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Surcharge - Cement Svc	152.00
402	cu ft	Bulk Materials Service Charge	552.95
Service Charges Subtotal:			\$704.95

#### Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	4hrs	Cement Pump Casing, 0 - 1000 ft	838.25
1	job	Fas-Lok Cement Head	208.25
1	job	Data Acquisition, Cement, Standard	539.00
70	miles	Mileage, Heavy Vehicle	209.48
70	miles	Mileage, Auto, Pick-Up or Treating Van	118.34
Equipment Subtotal:			\$1,913.32

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.  
 The technical data contained in this proposal is based on the best information available at the time of writing and is subject to further analysis and testing. The pricing data contained in this proposal are estimates only and may vary depending on the work actually performed. Pricing does not include federal, state and local taxes or royalties.  
 This quotation is based on BJ Services Company being awarded the work on a first call basis and within thirty (30) days of the proposal date. These prices will be subject to review if the work is done after thirty (30) days from the proposal date, or on a second or third call basis.

**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 13-3/8" Conductor Casing  
**Date:** June 25, 2009



**Proposal No:** 556450798A

**PRICE ESTIMATE**

**Freight/Delivery Charges**

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
639	tonmi	Bulk Delivery, Dry Products	637.40
Freight/Delivery Charges Subtotal:			\$637.40
<b>TOTAL:</b>			<b>\$8,852.52</b>

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.

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**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 9-5/8" Intermediate Casing  
**Date:** June 25, 2009



**Proposal No:** 556450798A

## WELL DATA

### ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.715 CASING	340	340
12.250 HOLE	3,950	3,950

### SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
9.625	9.001	32.3	3,950	3,950

Float Collar set @ 3,910 ft  
 Mud Density 8.50 ppg  
 Est. Static Temp. 106 ° F  
 Est. Circ. Temp. 98 ° F

### VOLUME CALCULATIONS

340 ft	x	0.3765 cf/ft	with	0 % excess	=	128.0 cf
2,810 ft	x	0.3132 cf/ft	with	100 % excess	=	1760.1 cf
800 ft	x	0.3132 cf/ft	with	50 % excess	=	375.8 cf
40 ft	x	0.4419 cf/ft	with	0 % excess	=	17.7 cf (inside pipe)
<b>TOTAL SLURRY VOLUME</b>					=	2281.6 cf
					=	407 bbls

TOC Lead: 0 ft  
 TOC Tail: 3150 ft

**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 9-5/8" Intermediate Casing  
**Date:** June 25, 2009



**Proposal No:** 556450798A

# FLUID SPECIFICATIONS

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Lead Slurry	1888	/ 2.4	= 770 sacks (50:50) Poz (Fly Ash):Premium Plus C Cement + 0.005 lbs/sack Static Free + 5% bwow Sodium Chloride + 0.25 lbs/sack Cello Flake + 5 lbs/sack LCM-1 + 0.005 gps FP-6L + 10% bwoc Bentonite + 134.7% Fresh Water
Tail Slurry	394	/ 1.3	= 295 sacks Premium Plus C Cement + 0.005 lbs/sack Static Free + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 0.005 gps FP-6L + 56.1% Fresh Water
Displacement			307.7 bbls Displacement Fluid

## **CEMENT PROPERTIES**

	<b>SLURRY NO. 1</b>	<b>SLURRY NO. 2</b>
Slurry Weight (ppg)	11.80	14.80
Slurry Yield (cf/sack)	2.45	1.34
Amount of Mix Water (gps)	13.57	6.33
Amount of Mix Fluid (gps)	13.57	6.33

**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 9-5/8" Intermediate Casing  
**Date:** June 25, 2009



**Proposal No:** 556450798A

### PRICE ESTIMATE

#### Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
278	lbs	Calcium Chloride	111.90
6468	lbs	Bentonite	1,063.99
3850	lbs	LCM-1	1,468.78
267	lbs	Cello Flake	427.07
385	74lbs	Poz (Fly Ash)	1,677.64
4353	lbs	Sodium Chloride	700.83
1	ea	Cement Plug, Rubber, Top 9-5/8 in	126.70
680	94lbs	Premium Plus C Cement	8,377.60
6	gals	FP-6L	196.35
6	lbs	Static Free	75.18
Product Material Subtotal:			\$14,226.04

#### Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Surcharge - Cement Svc	152.00
1333	cu ft	Bulk Materials Service Charge	1,833.54
Service Charges Subtotal:			\$1,985.54

#### Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	6hrs	Cement Pump Casing, 3001 - 4000 ft	1,522.50
1	job	Fas-Lok Cement Head	208.25
1	job	Data Acquisition, Cement, Standard	539.00
140	miles	Mileage, Heavy Vehicle	418.95
70	miles	Mileage, Auto, Pick-Up or Treating Van	118.34
1	job	Field Storage Bin, Up To 5 Days	418.25
Equipment Subtotal:			\$3,225.29

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.

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**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 9-5/8" Intermediate Casing  
**Date:** June 25, 2009



**Proposal No:** 556450798A

**PRICE ESTIMATE**

**Freight/Delivery Charges**

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1883	tonmi	Bulk Delivery, Dry Products	1,878.29
Freight/Delivery Charges Subtotal:			\$1,878.29
<b>TOTAL:</b>			<b>\$21,315.16</b>

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.

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Operator Name: Marshall & Winston, Inc.  
Well Name: Medlin Fee 8-1H  
Job Description: Kickoff Plug  
Date: June 25, 2009



Proposal No: 556450798A

### FLUID SPECIFICATIONS

<u>PLUG NO.</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
1	316	.9	= 350 sacks Class H Cement + 0.005 lbs/sack Static Free + 5% bwow Sodium Chloride + 1.2% bwoc CD-31 + 0.005 gps FP-6L + 26.7% Fresh Water

### CEMENT PROPERTIES

	<u>PLUG NO. 1</u>
Slurry Weight (ppg)	18.00
Slurry Yield (cf/sack)	0.90
Amount of Mix Water (gps)	3.01
Amount of Mix Fluid (gps)	3.01

**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** Kickoff Plug  
**Date:** June 25, 2009



**Proposal No:** 556450798A

### PRICE ESTIMATE

#### **Product Material**

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
350	94lbs	Class H Cement	3,062.50
395	lbs	CD-31	1,659.00
440	lbs	Sodium Chloride	70.84
2	gals	FP-6L	65.45
2	lbs	Static Free	25.06
Product Material Subtotal:			\$4,882.85

#### **Service Charges**

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Surcharge - Cement Svc	152.00
1	4hrs	Batch Mix Truck, 100-150 bbl, 1st 4 Hrs	988.75
366	cu ft	Bulk Materials Service Charge	503.43
Service Charges Subtotal:			\$1,644.18

#### **Equipment**

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	8hrs	Cement Pump Tubing, 9001 - 10000 ft	3,692.50
1	job	Data Acquisition, Cement, Standard	539.00
140	miles	Mileage, Heavy Vehicle	418.95
70	miles	Mileage, Auto, Pick-Up or Treating Van	118.34
Equipment Subtotal:			\$4,768.79

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.  
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**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** Kickoff Plug  
**Date:** June 25, 2009



**Proposal No:** 556450798A

**PRICE ESTIMATE**

**Freight/Delivery Charges**

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
590	tonmi	Bulk Delivery, Dry Products	588.53
Freight/Delivery Charges Subtotal:			\$588.53
<b>TOTAL:</b>			<b>\$11,884.35</b>

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**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 7" Production Casing  
**Date:** June 25, 2009



**Proposal No:** 556450798A

## WELL DATA

### ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
9.001 CASING	3,950	3,950
8.750 HOLE	9,130	8,730

### SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
7.000	6.094	32	9,130	8,730

**Float Collar set @** 9,090 ft  
**Mud Density** 8.90 ppg  
**Est. Static Temp.** 142 ° F  
**Est. Circ. Temp.** 129 ° F

### VOLUME CALCULATIONS

500 ft	x	0.1746 cf/ft	with	0 % excess	=	87.3 cf
3,550 ft	x	0.1503 cf/ft	with	50 % excess	=	800.5 cf
1,630 ft	x	0.1503 cf/ft	with	50 % excess	=	367.6 cf
40 ft	x	0.2026 cf/ft	with	0 % excess	=	8.1 cf (inside pipe)
<b>TOTAL SLURRY VOLUME</b>					=	1263.5 cf
					=	225 bbls

TOC Lead: 3450 ft  
 TOC Tail: 7500 ft

**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 7" Production Casing  
**Date:** June 25, 2009



**Proposal No:** 556450798A

### FLUID SPECIFICATIONS

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Lead Slurry	888	/ 2.4	= 365 sacks (50:50) Poz (Fly Ash) Premium Plus H Cement + 0.125 lbs/sack Cello Flake + 5 lbs/sack LCM-1 + 10% bwoc Bentonite + 0.2% bwoc FL-52A
Tail Slurry	376	/ 1.1	= 320 sacks Premium Plus H Cement + 1% bwoc FL-62 + 0.4% bwoc FL-52A + 45.8% Fresh Water
Displacement			327.9 bbls Displacement

### **CEMENT PROPERTIES**

	<b>SLURRY NO. 1</b>	<b>SLURRY NO. 2</b>
Slurry Weight (ppg)	11.60	15.60
Slurry Yield (cf/sack)	2.45	1.19
Amount of Mix Water (gps)	13.73	5.16

SLURRIES WILL BE TESTED BEFORE PUMPING JOB.

**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 7" Production Casing  
**Date:** June 25, 2009



**Proposal No:** 556450798A

### PRICE ESTIMATE

#### Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
3066	lbs	Bentonite	504.36
1825	lbs	LCM-1	696.24
46	lbs	Cello Flake	73.58
183	74lbs	Poz (Fly Ash)	797.42
1	ea	Cement Plug, Rubber, Top 7 in	76.48
182	lbs	FL-52A	1,535.17
4	gals	FP-6L	130.90
301	lbs	FL-62	2,033.26
4	lbs	Static Free	50.12
503	94lbs	Premium Plus H Cement	5,316.71
Product Material Subtotal:			\$11,214.24

#### Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Surcharge - Cement Svc	152.00
790	cu ft	Bulk Materials Service Charge	1,086.65
Service Charges Subtotal:			\$1,238.65

#### Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	8hrs	Cement Pump Casing, 9001 - 10000 ft	3,237.50
1	job	Fas-Lok Cement Head	208.25
1	job	Data Acquisition, Cement, Standard	539.00
70	miles	Mileage, Heavy Vehicle	209.48
70	miles	Mileage, Auto, Pick-Up or Treating Van	118.34
Equipment Subtotal:			\$4,312.57

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.

The technical data contained in this proposal is based on the best information available at the time of writing and is subject to further analysis and testing. The pricing data contained in this proposal are estimates only and may vary depending on the work actually performed. Pricing does not include federal, state and local taxes or royalties.

This quotation is based on BJ Services Company being awarded the work on a first call basis and within thirty (30) days of the proposal date. These prices will be subject to review if the work is done after thirty (30) days from the proposal date, or on a second or third call basis.

Operator Name: Marshall & Winston, Inc.  
Well Name: Medlin Fee 8-1H  
Job Description: 7" Production Casing  
Date: June 25, 2009



Proposal No: 556450798A

### PRICE ESTIMATE

#### Freight/Delivery Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1158	tonmi	Bulk Delivery, Dry Products	1,155.11
Freight/Delivery Charges Subtotal:			\$1,155.11
<b>TOTAL:</b>			<b>\$17,920.57</b>

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.

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Operator Name: Marshall & Winston, Inc.  
 Well Name: Medlin Fee 8-1H  
 Job Description: 4-1/2" Liner  
 Date: June 25, 2009



Proposal No: 556450798A

## WELL DATA

### ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
6.094 CASING	9,130	8,730
6.125 HOLE	13,207	8,730

### SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
4 500	4.000	11.6	13,207	8,730

Drill Pipe 3.5 (in) OD, 2.764 (in) ID, 13.3 (lbs/ft) set @ 8,980 ft

Drill Pipe 4.5 (in) OD, 4.0 (in) ID, 11.6 (lbs/ft) set @ 13,207 ft

Depth to Top of Liner 8,980 ft

Float Collar set @ 13,207 ft

Mud Density 8.80 ppg

Mud Type Water Based

Est. Static Temp. 145 ° F

Est. Circ. Temp. 129 ° F

### VOLUME CALCULATIONS

150 ft	x	0.0921 cf/ft	with	0 % excess	=	14 cf
4,077 ft	x	0.0942 cf/ft	with	110 % excess	=	806 cf
<b>TOTAL SLURRY VOLUME</b>					=	820 cf
					=	146 bbls

TOC: 8980 ft

**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 4-1/2" Liner  
**Date:** June 25, 2009



**Proposal No:** 556450798A

## FLUID SPECIFICATIONS

Spacer 20.0 bbls Surfactant Wash + 0.5 gpt S-150 @ 8.34 ppg

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Cement Slurry	820	/ 1.3	= 620 sacks (50:50) Poz (Fly Ash). Class H Cement + 3% bwoc Sodium Chloride + 0.2% bwoc R-3 + 0.2% bwoc CD-32 + 2% bwoc Bentonite + 0.3% bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 61.1% Fresh Water

Displacement 132.3 bbls Displacement

## **CEMENT PROPERTIES**

	<b>SLURRY NO. 1</b>
Slurry Weight (ppg)	14.00
Slurry Yield (cf/sack)	1.33
Amount of Mix Water (gps)	6.16
Estimated Pumping Time - 70 BC (HH:MM)	3:15
Free Water (mls) @ ° F @ 45 ° angle	0.0
Fluid Loss (cc/30min) at 1000 psi and 145 ° F	212.0

## **RHEOLOGIES**

<u>FLUID</u>	<u>TEMP</u>	<u>600</u>	<u>300</u>	<u>200</u>	<u>100</u>	<u>6</u>	<u>3</u>
Cement Slurry	@ 80 ° F	142	92	73	52	15	10
Cement Slurry	@ 145 ° F	105	78	62	46	16	10

Conduct Field Blend tests prior to the job. Email results to Mike Beggs.

Customer has requested.

-Thickening time range: 3-3.5 hrs

-0 Free water

-Fluid Loss: 200-500 cc's

**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 4-1/2" Liner  
**Date:** June 25, 2009



**Proposal No:** 556450798A

### PRICE ESTIMATE

#### Product Material

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
310	94lbs	Class H Cement	2,712.50
1042	lbs	Bentonite	171.41
157	lbs	Sodium Metasilicate	201.67
105	lbs	R-3	120.91
310	74lbs	Poz (Fly Ash)	1,350.83
954	lbs	Sodium Chloride	153.59
261	lbs	FL-52A	2,201.54
105	lbs	CD-32	437.33
1	gals	S-150	12.78
Product Material Subtotal:			\$7,362.56

#### Service Charges

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	ea	Personnel Surcharge - Cement Svc	152.00
667	cu ft	Bulk Materials Service Charge	917.46
Service Charges Subtotal:			\$1,069.46

#### Equipment

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
1	8hrs	Cement Pump Tubing, 13001 - 14000 ft	8,575.00
8	ea	4.5" x 5.75" Rigid Body Centralizers	1,260.00
1	job	Fas-Lok Cement Head	208.25
1	job	Data Acquisition, Cement, Standard	539.00
140	miles	Mileage, Heavy Vehicle	418.95
70	miles	Mileage, Auto, Pick-Up or Treating Van	118.34
Equipment Subtotal:			\$11,119.54

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**Operator Name:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Job Description:** 4-1/2" Liner  
**Date:** June 25, 2009



**Proposal No:** 556450798A

**PRICE ESTIMATE**

**Freight/Delivery Charges**

QTY	UNIT	PRODUCT DESCRIPTION	NET AMOUNT
957	tonmi	Bulk Delivery, Dry Products	954.61
Freight/Delivery Charges Subtotal:			\$954.61
<b>TOTAL:</b>			<b>\$20,506.17</b>

Customer will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other than standard grade frac sand are considered 'SPECIAL PROPPANTS'.

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## CONDITIONS

**BJ Services' performance of services and sale of materials is expressly conditioned upon the applicability of the Terms and Conditions contained in the current BJ Services Price Book. The Terms and Conditions include, among other things, an indemnity in favor of BJ Services from Customer for damage to the well bore, reservoir damage, loss of the hole, blowouts and loss of control of the well, even if caused by the negligence or other fault of BJ Services. The Terms and Conditions also limit the warranties provided by the BJ Services and the remedies to which Customer may be entitled in the event of a breach of warranty by BJ Services. For these reasons, we strongly recommend that you carefully review a copy of the Terms and Conditions. If you do not have a copy of the BJ Services Price Book, you can view the Terms and Conditions on BJ Services Web Site, [www.bjservices.com](http://www.bjservices.com). By requesting that BJ Services perform the services described herein, Customer acknowledges that such Terms and Conditions are applicable to the services. Further, by requesting the services, Customer warrants that its representative on the well location or other service site will be fully authorized to acknowledge such Terms and Conditions by executing a Field Receipt or other document presented by BJ Services containing such Terms and Conditions.**

**In the event that Customer and BJ Services have executed a Master Services Agreement covering the work to be performed, such Master Services Agreement shall govern in place of the Terms and Conditions. If you are interested in entering into Master Services Agreement with BJ Services, please contact us through the "Go BJ" button on the BJ Services Web Site.**

**Operator:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Date:** June 25, 2009



**Proposal No:** 556450798A

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## **PRODUCT DESCRIPTIONS**

### **Bentonite**

Commonly called gel, it is a clay material used as a cement extender and to control excessive free water.

### **CD-31**

A free flowing high molecular weight dispersant used to lower slurry viscosity and help provide turbulent flow properties at reduced pump rates. CD-31 also assists in fluid loss control.

### **CD-32**

A patented, free-flowing, water soluble polymer that is an efficient and effective dispersant for primary and remedial cementing.

### **Calcium Chloride**

A powdered, flaked or pelletized material used to decrease thickening time and increase the rate of strength development.

### **Cello Flake**

Graded (3/8 to 3/4 inch) cellophane flakes used as a lost circulation material.

### **Class H Cement**

Class H cement is an API type, all purpose oil well cement which is used without modification in wells up to 8,000 ft. It possesses a moderate sulfate resistance. With the use of accelerators or retarders, it can be used in a wide range of well depths and temperatures.

### **FL-52A**

A water soluble, high molecular weight fluid loss additive used in medium to low density slurries. It is functional from low to high temperature ranges.

### **FL-62**

A patented dry blend of water soluble polymers that are formulated to control the loss of fluid during cementing operations. A dispersant and bonding additive are proportioned to deliver consistent performance and control fluid loss in primary and squeeze cementing applications at low to moderate temperatures.

### **FP-6L**

A clear liquid that decreases foaming in slurries during mixing.

### **LCM-1**

A graded (8 to 60 mesh) naturally occurring hydrocarbon, asphaltite. It is used as a lost circulation material at low to moderate temperatures and will act as a slurry extender. Cement compressive strength is reduced.

### **Poz (Fly Ash)**

A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement.

### **Premium Plus H Cement**

Class H cement is an API type, all purpose oil well cement which is used without modification in wells up to 8,000 ft. It possesses a moderate sulfate resistance. With the use of accelerators or retarders, it can be used in a wide range of well depths and temperatures.

**Operator:** Marshall & Winston, Inc.  
**Well Name:** Medlin Fee 8-1H  
**Date:** June 25, 2009



**Proposal No:** 556450798A

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**PRODUCT DESCRIPTIONS (Continued)**

**R-3**

A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.

**S-150**

A blend of amphoteric and nonionic surfactants, recommended for use in water based stimulation treatments.

**Sodium Chloride**

At low concentrations, it is used to protect against clay swelling. At high concentrations, it is used to increase the

**Sodium Metasilicate**

An extender used to produce an economical, low density cement slurry.

**Static Free**

An anti-static additive used to prevent air entrainment due to agglomerated particles. Can be used in Cementing and Fracturing operations to aid in the flow of dry materials.



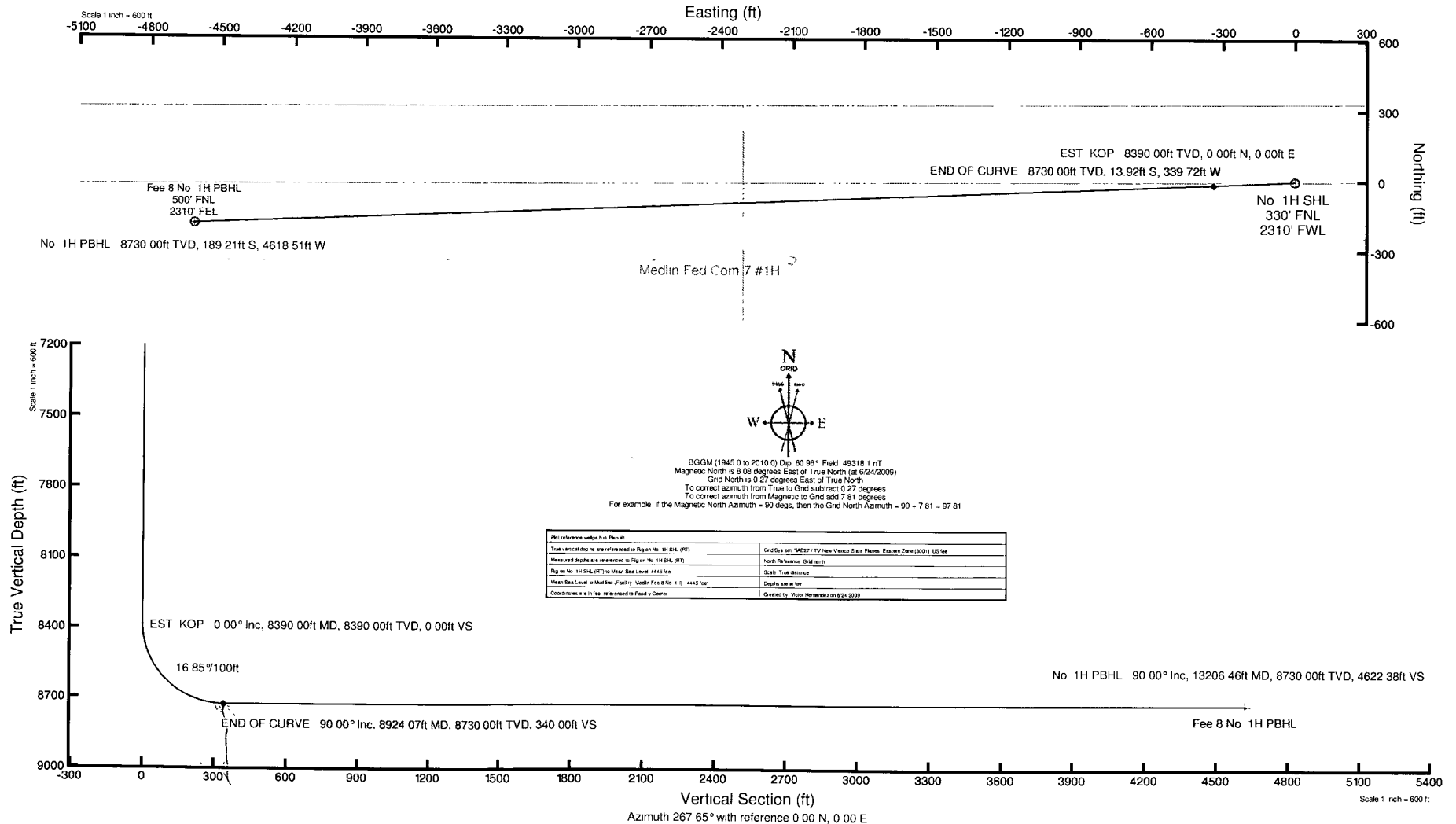
# Marshall & Winston, INC

Location: Chaves County, NM  
Field: (Medlin 8) Sec 8, T15S, R31E  
Facility: Medlin Fee 8 No. 1H

Slot: No 1H SHL  
Well: No 1H  
Wellbore: No. 1H PWB



Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0 00	0 000	267 654	0 00	0 00	0.00	0 00	0 00
EST KOP	8390 00	0 000	267 654	8390.00	0 00	0.00	0 00	0 00
END OF CURVE	8924 07	90 000	267 654	8730 00	-13 92	-339 72	16 85	340.00
No 1H PBHL	13206 46	90 000	267.654	8730 00	-189 21	-4618.51	0 00	4622 38





# Planned Wellpath Report

Plan #1  
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**INTEQ**

## REFERENCE WELLPATH IDENTIFICATION

Operator	Marshall & Winston, INC	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Medlin 8) Sec 8, T15S, R31E	Wellbore	No. 1H PWB
Facility	Medlin Fee 8 No. 1H		

## REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999935	Report Generated	6/24/2009 at 3:49:33 PM
Convergence at slot	0.27° East	Database/Source file	WA_Midland/No. 1H_PWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	649767.40	741187.20	33°02'11.864"N	103°50'40.664"W
Facility Reference Pt			649767.40	741187.20	33°02'11.864"N	103°50'40.664"W
Field Reference Pt			647804.30	736889.60	33°01'29.430"N	103°51'03.956"W

## WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 1H SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 1H SHL (RT) to Mean Sea Level	4445.00ft
Vertical Reference Pt	Rig on No. 1H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 1H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	267.65°



# Planned Wellpath Report

Plan #1  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	Marshall & Winston, INC	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Medlin 8) Sec 8, T15S, R31E	Wellbore	No. 1H PWB
Facility	Medlin Fee 8 No. 1H		

## WELLPATH DATA (52 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	267.654	0.00	0.00	0.00	0.00	0.00	Tie On
8390.00	0.000	267.654	8390.00	0.00	0.00	0.00	0.00	EST. KOP
8490.00†	16.852	267.654	8488.56	14.60	-0.60	-14.59	16.85	
8590.00†	33.703	267.654	8578.66	57.15	-2.34	-57.10	16.85	
8690.00†	50.555	267.654	8652.56	123.99	-5.08	-123.88	16.85	
8790.00†	67.407	267.654	8703.91	209.38	-8.57	-209.20	16.85	
8890.00†	84.259	267.654	8728.29	305.99	-12.53	-305.73	16.85	
8924.07	90.000	267.654	8730.00	340.00	-13.92	-339.72	16.85	END OF CURVE
8990.00†	90.000	267.654	8730.00	405.93	-16.62	-405.59	0.00	
9090.00†	90.000	267.654	8730.00	505.93	-20.71	-505.51	0.00	
9190.00†	90.000	267.654	8730.00	605.93	-24.80	-605.42	0.00	
9290.00†	90.000	267.654	8730.00	705.93	-28.90	-705.34	0.00	
9390.00†	90.000	267.654	8730.00	805.93	-32.99	-805.25	0.00	
9490.00†	90.000	267.654	8730.00	905.93	-37.08	-905.17	0.00	
9590.00†	90.000	267.654	8730.00	1005.93	-41.18	-1005.09	0.00	
9690.00†	90.000	267.654	8730.00	1105.93	-45.27	-1105.00	0.00	
9790.00†	90.000	267.654	8730.00	1205.93	-49.36	-1204.92	0.00	
9890.00†	90.000	267.654	8730.00	1305.93	-53.46	-1304.83	0.00	
9990.00†	90.000	267.654	8730.00	1405.93	-57.55	-1404.75	0.00	
10090.00†	90.000	267.654	8730.00	1505.93	-61.64	-1504.67	0.00	
10190.00†	90.000	267.654	8730.00	1605.93	-65.74	-1604.58	0.00	
10290.00†	90.000	267.654	8730.00	1705.93	-69.83	-1704.50	0.00	
10390.00†	90.000	267.654	8730.00	1805.93	-73.92	-1804.42	0.00	
10490.00†	90.000	267.654	8730.00	1905.93	-78.02	-1904.33	0.00	
10590.00†	90.000	267.654	8730.00	2005.93	-82.11	-2004.25	0.00	
10690.00†	90.000	267.654	8730.00	2105.93	-86.20	-2104.16	0.00	
10790.00†	90.000	267.654	8730.00	2205.93	-90.30	-2204.08	0.00	
10890.00†	90.000	267.654	8730.00	2305.93	-94.39	-2304.00	0.00	
10990.00†	90.000	267.654	8730.00	2405.93	-98.48	-2403.91	0.00	
11090.00†	90.000	267.654	8730.00	2505.93	-102.58	-2503.83	0.00	

# Planned Wellpath Report

Plan #1  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	Marshall & Winston, INC	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Medlin 8) Sec 8, T15S, R31E	Wellbore	No. 1H PWB
Facility	Medlin Fee 8 No. 1H		

## WELLPATH DATA (52 stations) † = interpolated/extrapolated station.

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
11190.00†	90.000	267.654	8730.00	2605.93	-106.67	-2603.75	0.00	
11290.00†	90.000	267.654	8730.00	2705.93	-110.76	-2703.66	0.00	
11390.00†	90.000	267.654	8730.00	2805.93	-114.86	-2803.58	0.00	
11490.00†	90.000	267.654	8730.00	2905.93	-118.95	-2903.49	0.00	
11590.00†	90.000	267.654	8730.00	3005.93	-123.04	-3003.41	0.00	
11690.00†	90.000	267.654	8730.00	3105.93	-127.14	-3103.33	0.00	
11790.00†	90.000	267.654	8730.00	3205.93	-131.23	-3203.24	0.00	
11890.00†	90.000	267.654	8730.00	3305.93	-135.32	-3303.16	0.00	
11990.00†	90.000	267.654	8730.00	3405.93	-139.42	-3403.07	0.00	
12090.00†	90.000	267.654	8730.00	3505.93	-143.51	-3502.99	0.00	
12190.00†	90.000	267.654	8730.00	3605.93	-147.61	-3602.91	0.00	
12290.00†	90.000	267.654	8730.00	3705.93	-151.70	-3702.82	0.00	
12390.00†	90.000	267.654	8730.00	3805.93	-155.79	-3802.74	0.00	
12490.00†	90.000	267.654	8730.00	3905.93	-159.89	-3902.66	0.00	
12590.00†	90.000	267.654	8730.00	4005.93	-163.98	-4002.57	0.00	
12690.00†	90.000	267.654	8730.00	4105.93	-168.07	-4102.49	0.00	
12790.00†	90.000	267.654	8730.00	4205.93	-172.17	-4202.40	0.00	
12890.00†	90.000	267.654	8730.00	4305.93	-176.26	-4302.32	0.00	
12990.00†	90.000	267.654	8730.00	4405.93	-180.35	-4402.24	0.00	
13090.00†	90.000	267.654	8730.00	4505.93	-184.45	-4502.15	0.00	
13190.00†	90.000	267.654	8730.00	4605.93	-188.54	-4602.07	0.00	
13206.46	90.000	267.654	8730.00	4622.38	-189.21	-4618.51	0.00	No. 1H PBHL

## HOLE & CASING SECTIONS Ref Wellbore: No. 1H PWB Ref Wellpath: Plan #1

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.75in Open Hole	8390.00	9124.00	734.00	8390.00	8730.00	0.00	0.00	-22.10	-539.48
6.125in Open Hole	9124.00	13206.46	4082.46	8730.00	8730.00	-22.10	-539.48	-189.21	-4618.51





# Planned Wellpath Report

Plan #1  
Page 4 of 4



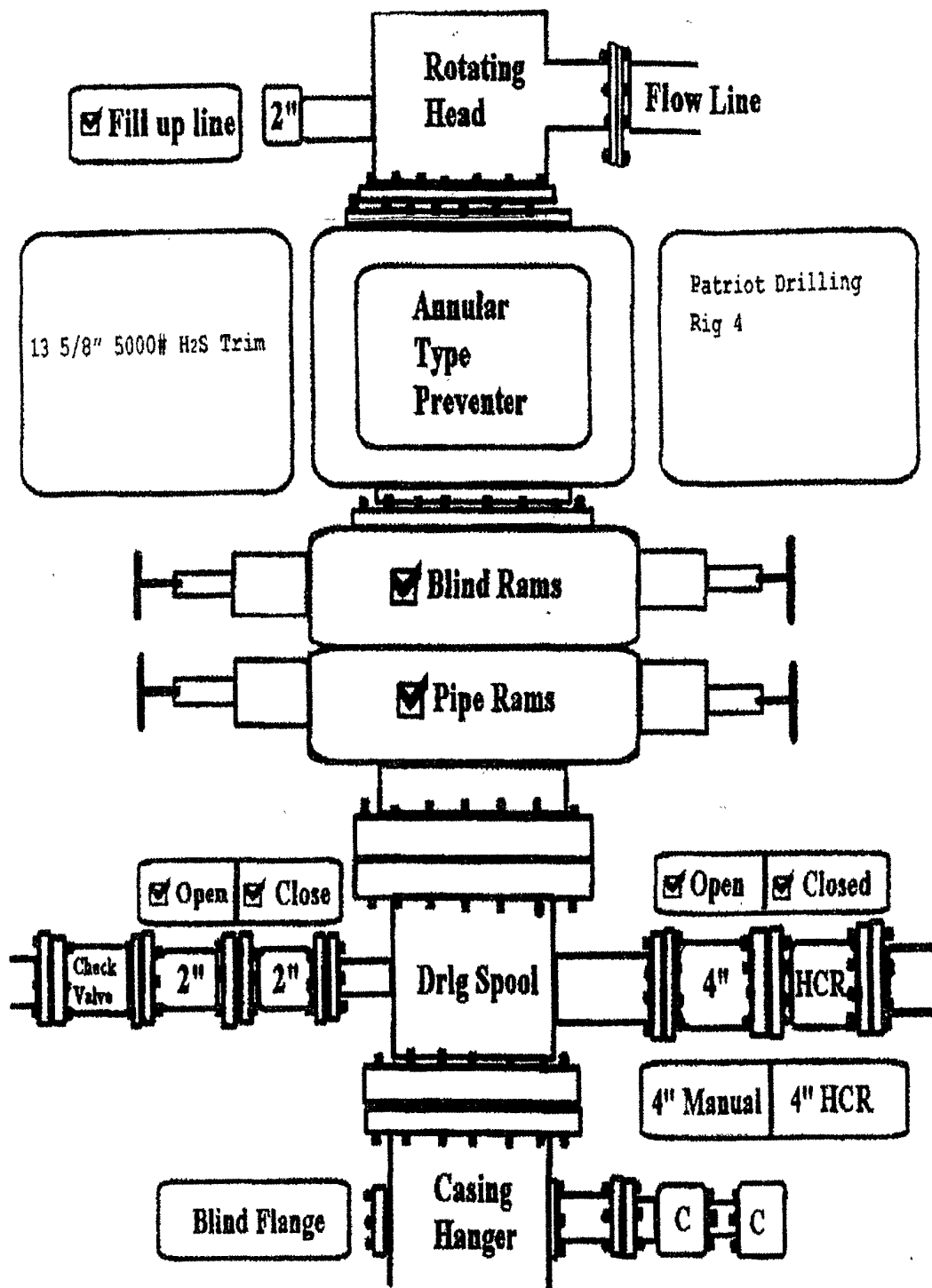
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Marshall & Winston, INC	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Medlin 8) Sec 8, T15S, R31E	Wellbore	No. 1H PWB
Facility	Medlin Fee 8 No. 1H		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) Fee 8 No. 1H PBHL	13206.46	8730.00	-189.21	-4618.51	645149.20	740998.00	33°02'10.201"N	103°51'34.923"W	point

SURVEY PROGRAM Ref Wellbore: No. 1H PWB Ref Wellpath: Plan #1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	13206.46	NaviTrak (Standard)		No. 1H PWB

AFE No. API # Permit No. Project No.	<div data-bbox="676 86 825 126" data-label="Image"> </div> <b>Medlin Fee 8-1H</b> Chavez County, NM <b>Proposed Wellbore Sketch</b>	AFE Information Dry Hole.      Days. Proposed TD: 13207' TMD 8730' TVD v
<div data-bbox="308 308 872 1372" data-label="Figure"> </div> <div data-bbox="910 332 1676 1112" data-label="Text"> <p>Drill 17-1/2" Hole with 8 4-8 6 Spud Mud  <b>13-3/8" Surface at 340"</b></p> <p>Drill out with 12-1/4" Bit with 10# Salt Saturated Water</p> <p>Cement to surface</p> <p><b>9-5/8" Casing 26 ppf P110 LTC at 3950'.</b></p> <p>Drill with 8-3/4" to TD of Pilot Hole with 8 4# - 9 5# Cut Brne Vis 28-29 and Water Loss no greater than 12</p> <p>Kick off with 8-3/4" bit at about 8390'</p> <p><b>Land Curve at 8730' TVD 8924' TMD and drill to 9130' Run 7" casing and cement to intermediate casing</b>          Note Will drill extra 200' after 90 degrees is reached</p> <p>Drill out with 6-1/8" bit to TD  <b>Hang liner At 8730' TVD, 8980' TMD and cement to top of Liner Hanger.</b></p> </div> <div data-bbox="1570 1120 1810 1193" data-label="Text"> <p><b>4-1/2" P-110 11.6# Casing</b>  <b>TMD 13.207'</b></p> </div> <div data-bbox="314 1266 514 1372" data-label="Text"> <p>Pilot Hole          TD = 9100'</p> </div>		
<div data-bbox="293 1409 685 1458" data-label="Text"> <p><u>Well Information</u>          Surface Location Chavez County, T15S R31E Section 8</p> </div>		



5M BOPE SCHEMATIC



June 30, 2009

Oil Conservation Division  
1625 North French Drive  
Hobbs, New Mexico 88240

**RECEIVED**

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**HOBBSOCD**

Re: OGRID No. 014187  
Medlin Fee 9-1H, Medlin Fee  
8-1H and Medlin Fee 8-2H  
Chaves County, New Mexico

Gentlemen:

Vernon D. Dyer is hereby authorized to act on the behalf of Marshall & Winston, Inc. in all regulatory matters relating to approval of and the drilling and completion of the above captioned wells. Should there be any questions regarding this matter, you are welcome to contact me or Gabriel Herrera at (432) 684-6373.

Very truly yours,

A handwritten signature in cursive script that reads 'Tom M. Brandt'.

Tom M. Brandt  
President

TMB/glb