

1625 N. French Dr., Hobbs, NM 88240

District II

811 S. First St., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural ResourcesForm C-104
Revised August 1, 2011Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Marshall & Winston, Inc. P. O. Box 50880 Midland, TX 79710-0880		² OGRID Number 14187	
		³ Reason for Filing Code/ Effective Date NW	
⁴ API Number 30 - 005-64347	⁵ Pool Name Round Tank - San Andres		⁶ Pool Code 52770
⁷ Property Code 325167	⁸ Property Name Hi Bob Federal		⁹ Well Number 3H

II. ¹⁰ Surface Location

UL or lot no. P	Section 8	Township 15S	Range 29E	Lot Idn	Feet from the 660	North/South Line South	Feet from the 1040	East/West line East	County Chaves
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¹¹ Bottom Hole Location

UL or lot no. P	Section 17	Township 15S	Range 29E	Lot Idn	Feet from the 51	North/South line South	Feet from the 1205	East/West line East	County Chaves
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¹² Lse Code F	¹³ Producing Method Code P	¹⁴ Gas Connection Date	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date
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III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
278421	Holly Transportation 1602 W. Main Artesia, NM 88210	O
221115	Frontier Field Services, LLC 2002 Timberloch Place, Suite 110 The Woodlands, TX 77380	G

IV. Well Completion Data

²¹ Spud Date 10/21/20	²² Ready Date 12/23/20	²³ TD 8763'	²⁴ PBDT 8712'	²⁵ Perforations 3665-8710'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set		³⁰ Sacks Cement	
17 ½"	13 3/8" 48# H40	230'		230 sx C	
12 ¼"	9 5/8" 40# HCL80	1260.79'		430 sx C	
8 ¾"	5 ½"/7" 26#/17# P110	8764.45'		2310 sx C	
	3 ½" J55	2400'			

V. Well Test Data

³¹ Date New Oil 12/23/20	³² Gas Delivery Date 01/01/21	³³ Test Date 01/18/21	³⁴ Test Length 24 hrs	³⁵ Tbg. Pressure 69	³⁶ Csg. Pressure 60
³⁷ Choke Size	³⁸ Oil 216	³⁹ Water 1501	⁴⁰ Gas 94		⁴¹ Test Method P

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Printed name:
Todd PassmoreTitle:
Operations ManagerE-mail Address:
tpassmore@mar-win.comDate:
01/26/21Phone:
432-684-6373

OIL CONSERVATION DIVISION

Approved by: Kurt Simmons

Title:
NMOCDApproval Date:
02/26/2021

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II
611 S. FIRST ST., ARTESIA, NM 88210
Phone: (505) 748-1283 Fax: (505) 748-8720

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3480 Fax: (505) 476-3482

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-005-64347	Pool Code 52770	Pool Name ROUND TANK; SAN ANDRES
Property Code 325167	Property Name HI BOB FEDERAL	Well Number 3H
OGRID No. 14187	Operator Name MARSHALL & WINSTON INC.	Elevation 3813.3'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	8	15-S	29-E		660	SOUTH	1040	EAST	CHAVES

Bottom Hole Location If Different From Surface

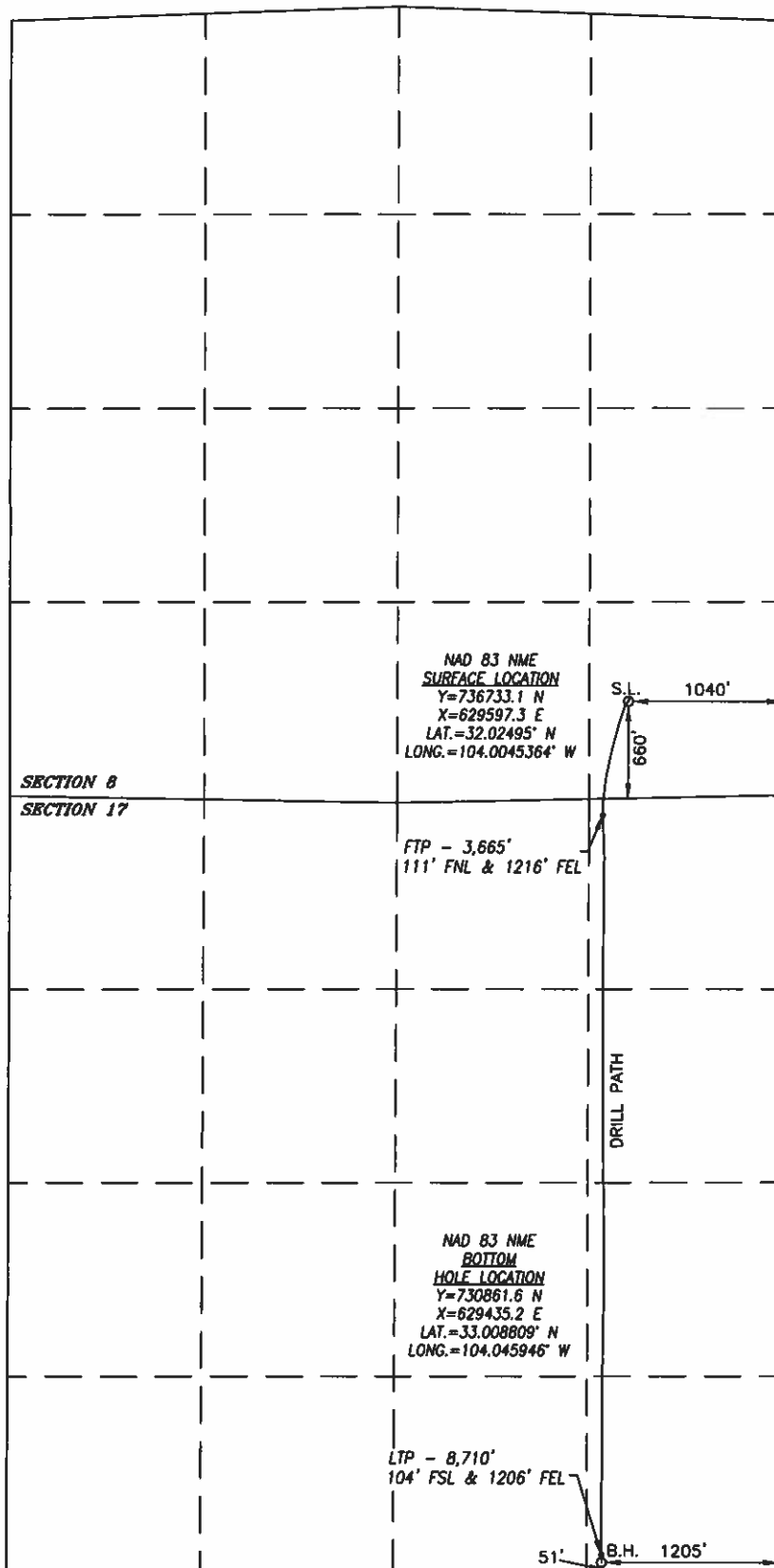
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	17	15-S	29-E		51	SOUTH	1205	EAST	CHAVES

Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
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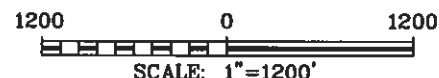
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SEE PAGE 2

Property Code 325167	Property Name HI BOB FEDERAL	Well Number 3H
OGRID No. 14187	Operator Name MARSHALL & WINSTON INC.	Elevation 3813.3'



**SURFACE INFO & BOREPATH SHOWN HEREON IS
BASED ON DIRECTIONAL SURVEY REPORT
PROVIDED BY MARSHALL & WINSTON INC. FOR
THE HI BOB FEDERAL SH SUPPLIED TO
HARCROW SURVEYING, LLC ON JANUARY 15,
2021**



OPERATOR CERTIFICATION

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.

T.N.K.

1.15.21

Signature

Date _____

Todd Passmore

Printed Name _____

tpassmore@mar-win.com

E-mail Address

SURVEYOR CERTIFICATION

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.

JAN. 30, 2020/SEPT. 25, 2018

Date of Survey/Date of Geographic Survey

Signature & Seal of Professional Surveyor



CHAD HARCROW 1/15/21
Certificate No. CHAD HARCROW 17777

Marshall & Winston, Inc.

HI Bob Federal #3H
Chaves County, New Mexico
Job No: WT-20-064
Rig: Stoneham 5



Mid 87° 81' 1" E 100° 96' 2" S; 31406 N 104° 2' 45.349 W

SECTION DETAILS									
Sec	MD	Inc	Asl	TVD	+N/-S	+E/-W	Dlog	TTrace	Vsect
1	8698.00	89.27	179.15	3266.74	-5806.50	-163.12	0.000	0.00	5806.45
2	8763.00	89.27	179.15	3267.57	-5871.49	-162.16	0.000	0.00	5871.43

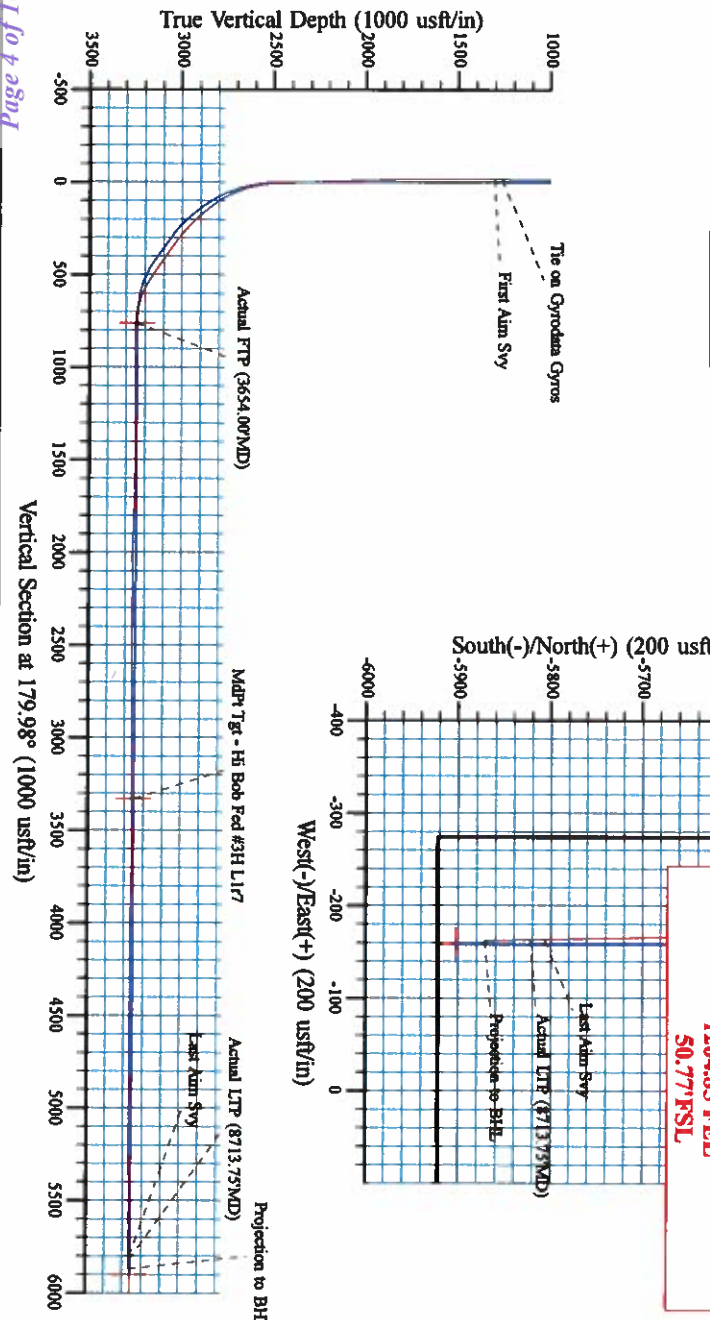
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Annotation	
FTP - HI Bob Fed #3H L117	3240.00	-763.40	-158.70	735969.70	629438.60	33° 1' 22.254 N	104° 2' 45.201 W	Last Aim Svy	
MdPr Tgr - HI Bob Fed #3H L117	3250.00	-3332.85	-157.99	733400.25	629439.31	33° 0' 56.830 N	104° 2' 45.275 W	Projection to BHL	
PBHL - HI Bob Fed #3H L117	3260.00	-5902.30	-157.30	730830.80	629440.00	33° 0' 31.406 N	104° 2' 45.349 W		

PROJECT DETAILS: Chaves County, New Mexico
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

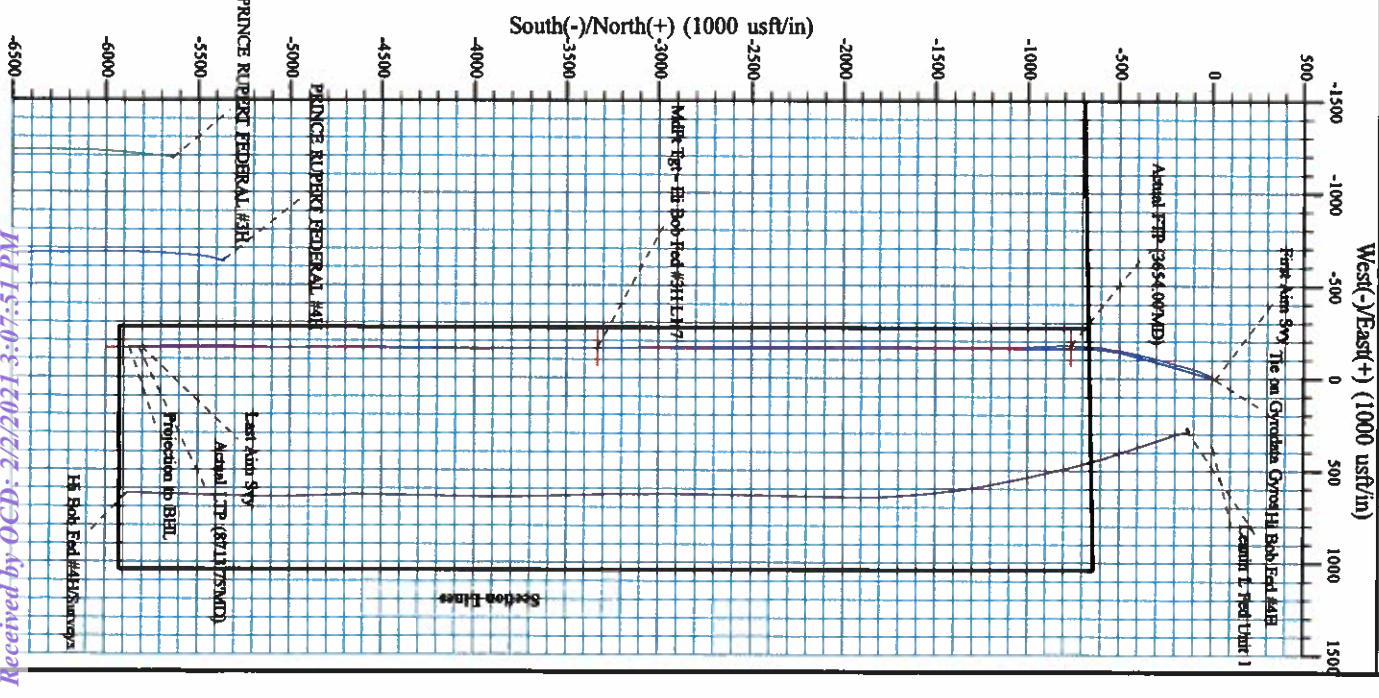
SITE DETAILS: HI Bob Federal #3H
Site Centre Northing: 736733.10
Easting: 629597.30
Positional Uncertainty: 0.00
Convergence: 0.16
Local North: Grid

Drawn By: PGR
Date Created: 05/28/19
Date Revised: 11/1/20
File: Marshall & Winston - HI Bob Federal #3H - As Drilled LTR wpc

Azimuths to Grid North
True North: -0.16°
Magnetic North: 7.06°
Magnetic Field Strength: 48021.9nT
Dip Angle: 60.64°
Date: 10/26/2020
Model: MHD



Section Crossing
3552.29' MD 3234.01' TVD
1211.90' FEL
Actual FTP
3654.00' MD 3249.99' TVD
Actual LTP
8713.75' MD 3266.94' TVD
Actual BHL
8763.00' MD 3267.57' TVD
1204.85' FEL
50.77' FSL



Survey Report

Company:	Marshall & Winston, Inc.	Local Co-ordinate Reference:	Site HI Bob Federal #3H
	Chaves County, New Mexico		Well @ 3831.30usft (Stoneham 5)
Project:	Chaves County, New Mexico	TVD Reference:	Well @ 3831.30usft (Stoneham 5)
			MD Reference:
Site:	HI Bob Federal #3H	North Reference:	Grid
	HI Bob Fed #3H		Minimum Curvature
Wellbore:	Drilling	Survey Calculation Method:	EDMRESTORED
	Surveys		

Project		Chaves County, New Mexico	
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
	North American Datum 1983		
Map Zone:		New Mexico Eastern Zone	

Site		HI Bob Federal #3H	
Site Position:	Northing:	736,733.10 usft	Latitude:
	Easting:	629,597.30 usft	Longitude:
From:		Map	
Position Uncertainty:		0.00 usft	
		Slot Radius:	
		13-3/16 "	
		Grid Convergence:	
		0.16 "	

Well		HI Bob Fed #3H	
Well Position	+N-S	0.00 usft	Northing:
	+E-W	0.00 usft	Easting:
Position Uncertainty		0.00 usft	
		Wellhead Elevation:	
		usft	
		Ground Level:	
		usft	
		Latitude:	
		33° 1' 29.803 N	
		Longitude:	
		104° 2' 43.312 W	
		3,813.30 usft	

Wellbore		Drilling	
Magnetics	Model Name	Sample Date	Declination
	MVHD	10/26/2020	(°)
		7.21	
		Dip Angle	
		60.64	
		Field Strength	
		48,021.889	

Design		Surveys	
Audit Notes:	Version:	1.0	Phase:
			ACTUAL
		Tie On Depth:	
		0.00	
		Vertical Section:	
		Depth From (TVD)	
		+N-S	
		(usft)	
		+E-W	
		(usft)	
		Direction	
		(°)	
		179.98	

Survey Program		Date 11/2/2020	
From (usft)	To (usft)	Survey (Wellbore)	
		Tool Name	
		Description	
		OWSG XYZ Accel with XY Static and Continuous	
		OWSG MWD + HDGM	
		GYRO-NS-CT	
		MWD+HDGM	

Survey											
Measured	Depth	Inclination	Azimuth	Vertical	+N-S	+E-W	Vertical	Dogleg	Build	Turn	
	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(%/100ft)	(%/100ft)	(%/100ft)	
		1.35	42.71	1,265.81	15.81	6.97	-15.80	0.000	0.000	0.000	
		1,266.00									
		Tie on Gyrodatta Gyros									
		1,306.00	1.19	40.99	1,305.80	16.47	7.56	-16.46	0.411	-0.400	-4.300
		First Aim Svy									
		1,369.00	1.19	47.14	1,368.79	17.40	8.47	-17.40	0.203	0.000	9.762
		1,433.00	0.62	49.34	1,432.78	18.08	9.22	-18.08	0.892	-0.891	3.437
		1,496.00	0.13	80.45	1,495.78	18.32	9.55	-18.31	0.814	-0.778	49.381
		1,560.00	0.18	124.83	1,559.78	18.27	9.70	-18.27	0.197	0.078	69.344
		1,623.00	0.70	212.81	1,622.77	17.89	9.57	-17.89	1.137	0.825	139.651

Survey Report

Company: Marshall & Winston, Inc.	Project: Chaves County, New Mexico	Site: Hi Bob Federal #3H	Well: Hi Bob Fed #3H	Wellbore: Drilling	Design: Surveys
	Local Co-ordinate Reference:				
	Survey Calculation Method:				

TVD Reference: Well @ 3831.30usft (Stoneham 5)	MD Reference: Well @ 3831.30usft (Stoneham 5)	North Reference: Gtd	EDM/RESTORED
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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,686.00	1.58	222.04	1,685.76	16.92	7.49	-16.92	1.422	1.397	14.651
1,750.00	1.71	226.87	1,749.74	15.61	7.49	-15.61	0.297	0.203	7.547
1,813.00	1.67	230.83	1,812.71	14.39	6.10	-14.39	0.196	-0.063	8.286
1,876.00	1.63	228.54	1,875.68	13.22	4.71	-13.22	0.122	-0.063	-3.635
1,939.00	1.71	236.37	1,938.65	12.11	3.26	-12.10	0.383	0.127	12.429
2,002.00	1.67	237.86	2,001.63	11.10	1.70	-11.10	0.094	-0.063	2.365
2,065.00	1.80	221.69	2,064.60	9.87	0.26	-9.87	0.801	0.206	-25.667
2,128.00	2.46	208.94	2,128.55	7.92	-1.07	-7.92	1.263	1.031	-19.922
2,192.00	2.37	208.59	2,191.50	5.59	-2.35	-5.59	0.145	-0.143	-0.556
2,255.00	2.42	208.33	2,254.44	3.27	-3.60	-3.28	0.081	0.079	-0.413
2,319.00	2.33	208.86	2,318.39	0.95	-4.87	-0.95	0.145	-0.141	0.828
2,382.00	2.20	209.38	2,381.34	-1.23	-6.08	-1.23	0.209	-0.206	0.825
2,445.00	2.20	209.91	2,444.29	-3.33	-7.28	-3.33	0.032	0.000	0.841
2,477.00	3.60	206.31	2,476.25	-4.76	-8.03	-4.76	4.410	4.375	-11.250
2,509.00	5.54	206.13	2,508.15	-7.05	-9.16	-7.05	6.063	6.062	-0.562
2,540.00	7.56	209.21	2,538.94	-10.18	-10.81	-10.17	6.612	6.516	9.935
2,572.00	9.89	210.79	2,570.57	-14.37	-13.24	-14.37	7.319	7.281	4.937
2,604.00	13.14	210.35	2,601.92	-19.88	-16.49	-19.87	10.160	10.156	-1.375
2,635.00	16.48	208.07	2,631.89	-26.80	-20.34	-26.79	10.935	10.774	-7.355
2,667.00	20.22	206.31	2,662.26	-35.76	-24.83	-35.75	11.814	11.687	-5.500
2,699.00	23.69	202.97	2,691.93	-46.64	-29.89	-46.63	11.520	10.844	-10.437
2,731.00	27.21	201.30	2,720.82	-59.38	-35.06	-59.37	11.225	11.000	-5.219
2,762.00	29.58	199.80	2,748.09	-73.19	-40.23	-73.17	7.983	7.645	-4.839
2,794.00	31.97	197.43	2,775.59	-88.70	-45.44	-88.69	8.374	7.469	-7.406
2,825.00	34.24	195.76	2,801.55	-104.93	-50.27	-104.91	7.891	7.323	-5.387
2,857.00	36.66	195.59	2,827.62	-122.80	-55.28	-122.78	7.569	7.562	-0.531
2,889.00	38.86	195.76	2,852.92	-141.66	-60.58	-141.64	6.883	6.875	0.531
2,920.00	41.14	195.76	2,876.66	-160.84	-65.99	-160.82	7.355	7.355	0.000
2,952.00	42.81	196.02	2,900.45	-181.42	-71.85	-181.40	5.247	5.219	0.812
2,984.00	44.00	196.20	2,923.70	-202.55	-77.95	-202.52	3.739	3.719	0.562
3,016.00	46.24	195.94	2,946.28	-224.33	-84.22	-224.31	7.024	7.000	-0.812
3,047.00	48.48	195.06	2,967.27	-246.31	-90.32	-246.28	7.521	7.226	-2.839
3,079.00	49.93	194.62	2,988.18	-269.73	-96.52	-269.69	4.649	4.531	-1.375
3,110.00	52.09	194.00	3,007.69	-293.07	-102.47	-293.04	7.139	6.968	-2.000
3,142.00	53.54	193.56	3,027.03	-317.83	-108.54	-317.79	4.662	4.531	-1.375
3,173.00	54.73	193.48	3,045.19	-342.26	-114.42	-342.22	3.844	3.839	-0.256
3,205.00	55.82	193.39	3,063.42	-367.84	-120.53	-367.80	3.414	3.406	-0.281
3,236.00	57.23	193.21	3,080.51	-393.00	-126.47	-392.96	4.574	4.548	-0.581
3,268.00	56.40	193.39	3,098.03	-419.06	-132.64	-419.02	2.636	-2.594	0.562
3,299.00	55.65	193.04	3,115.35	-444.09	-138.51	-444.04	2.594	-2.419	-1.129
3,331.00	54.77	191.89	3,133.61	-469.75	-144.19	-469.70	4.034	-2.750	-3.594
3,363.00	55.34	190.84	3,151.94	-495.47	-149.35	-495.41	3.226	1.781	-3.281
3,395.00	57.58	188.99	3,169.62	-521.74	-153.94	-521.68	8.498	7.000	-5.781

Survey Report

Company: Marshall & Winston, Inc. Project: Chaves County, New Mexico Site: HI Bob Federal #3H Well: HI Bob Fed #3H Wellbore: Drilling Design: Surveys	Local Co-ordinate Reference: Well @ 3831.30usft (Stoneham 5) Well @ 3831.30usft (Stoneham 5) Grid Minimum Curvature EDMRESTORED	Database: Survey Calculation Method: North Reference: MID Reference: TVD Reference:	Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,426.00	60.57	187.68	3,185.55	-548.05	-157.79	547.99	10.304	9.645	-4.226
3,458.00	63.52	187.24	3,200.55	-576.07	-161.46	576.01	9.298	9.219	-1.375
3,490.00	67.60	186.62	3,213.79	-604.98	-164.97	604.93	12.871	12.750	-1.937
3,521.00	70.86	185.30	3,224.78	-633.81	-167.98	633.75	11.244	10.516	-4.258
3,553.00	74.90	184.34	3,234.20	-664.28	-170.54	664.22	12.946	12.625	-3.000
3,585.00	78.77	183.37	3,241.48	-695.36	-172.63	695.30	12.449	12.094	-3.031
3,617.00	82.68	181.96	3,246.64	-726.90	-174.10	726.84	12.969	12.219	-4.406
3,648.00	86.29	180.20	3,249.62	-757.74	-174.68	757.68	12.943	11.645	-5.677
3,653.04	86.64	179.95	3,249.93	-762.78	-174.69	762.72	8.428	6.850	-4.920
3,654.00	86.70	179.90	3,249.99	-763.73	-174.69	763.67	8.428	6.851	-4.918
Actual FTP (3654.00MD)									
3,682.00	88.62	178.53	3,251.13	-791.70	-174.30	791.64	8.428	6.854	-4.910
3,712.00	89.36	177.83	3,251.66	-821.68	-173.35	821.62	3.395	2.467	-2.333
3,775.00	90.95	177.74	3,251.49	-884.63	-170.92	884.57	2.528	2.524	-0.143
3,839.00	91.03	177.39	3,250.38	-948.57	-168.20	948.51	0.561	0.125	-0.547
3,902.00	89.41	177.92	3,250.14	-1,011.51	-165.82	1,011.45	2.706	-2.571	0.841
3,966.00	89.36	179.59	3,250.83	-1,075.49	-164.23	1,075.43	2.610	-0.078	2.609
4,029.00	90.46	180.73	3,250.93	-1,138.49	-164.41	1,138.43	2.515	1.746	1.810
4,092.00	90.07	180.64	3,250.64	-1,201.48	-165.16	1,201.43	0.635	-0.619	-0.143
4,156.00	90.95	180.56	3,250.07	-1,265.48	-165.83	1,265.42	1.381	1.375	-0.125
4,219.00	90.81	180.20	3,249.10	-1,328.47	-166.25	1,328.41	0.613	-0.222	-0.571
4,283.00	89.54	180.20	3,248.90	-1,392.47	-166.47	1,392.41	1.984	-1.984	0.000
4,346.00	89.76	180.20	3,248.29	-1,455.46	-166.69	1,455.41	0.349	0.349	0.000
4,409.00	91.16	179.94	3,248.78	-1,518.46	-166.77	1,518.40	2.260	2.222	-0.413
4,472.00	90.33	179.77	3,247.96	-1,581.45	-166.61	1,581.40	1.345	-1.317	-0.270
4,536.00	88.84	180.03	3,248.43	-1,645.45	-166.50	1,645.39	2.363	-2.328	0.406
4,599.00	87.08	180.47	3,250.67	-1,708.41	-166.77	1,708.35	2.880	-2.794	0.698
4,663.00	87.38	180.56	3,253.76	-1,772.33	-167.34	1,772.27	0.489	0.469	0.141
4,726.00	87.60	180.82	3,256.52	-1,835.26	-168.10	1,835.21	0.540	0.349	0.413
4,789.00	87.38	179.68	3,259.28	-1,898.20	-168.38	1,898.14	1.841	-0.349	-1.810
4,853.00	88.79	179.50	3,261.42	-1,962.16	-167.92	1,962.10	2.221	2.203	-0.281
4,916.00	90.29	179.41	3,261.92	-2,025.16	-167.32	2,025.10	2.385	2.381	-0.143
4,979.00	91.38	179.50	3,261.01	-2,088.15	-166.72	2,088.09	1.736	1.730	0.143
5,042.00	90.90	179.50	3,259.73	-2,152.13	-166.16	2,152.07	0.750	-0.750	0.000
5,106.00	90.24	179.77	3,259.11	-2,215.13	-165.76	2,215.07	1.132	-1.048	0.429
5,169.00	88.75	180.03	3,259.66	-2,278.12	-165.65	2,278.06	2.401	-2.365	0.413
5,232.00	89.41	180.29	3,260.67	-2,341.11	-165.83	2,341.05	1.126	1.048	0.413
5,296.00	88.75	180.20	3,261.70	-2,405.10	-166.10	2,405.05	1.041	-1.031	-0.141
5,359.00	89.41	180.20	3,262.71	-2,468.09	-166.32	2,468.04	1.048	1.048	0.000
5,422.00	90.73	179.94	3,262.64	-2,531.09	-166.40	2,531.04	2.135	2.095	-0.413
5,485.00	90.33	179.85	3,262.05	-2,594.09	-166.28	2,594.03	0.651	-0.635	-0.143
5,548.00	90.33	179.68	3,261.69	-2,657.09	-166.02	2,657.03	0.270	0.000	-0.270
5,612.00	90.11	180.47	3,261.44	-2,721.09	-166.11	2,721.03	1.281	-0.344	1.234

Survey Report

Company:	Marshall & Winston, Inc.
	Chaves County, New Mexico
	Well: HI Bob Federal #3H
Wellbore:	Drilling Surveys
Design:	
Local Co-ordinate Reference:	
TVD Reference:	
MD Reference:	
North Reference:	
Survey Calculation Method:	
EDM RESTORED	

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Section (usft)	Dogleg Rate (%/100ft)	Build Rate (%/100ft)	Turn Rate (%/100ft)
5,675.00	90.11	180.38	3,261.32	-2,784.09	-166.58	2,784.03	0.143	0.000	-0.143
5,704.00	90.99	180.12	3,261.04	-2,813.08	-166.70	2,813.03	3.164	3.034	-0.897
5,768.00	89.98	179.24	3,260.50	-2,877.08	-166.34	2,877.02	2.093	-1.578	-1.375
5,831.00	89.76	178.62	3,260.65	-2,940.07	-165.17	2,940.01	1.044	-0.349	-0.984
5,884.00	89.71	178.27	3,260.94	-3,003.04	-163.46	3,002.99	0.561	-0.079	-0.556
5,957.00	90.33	178.27	3,260.92	-3,066.01	-161.56	3,065.96	0.984	0.000	1.234
6,021.00	90.99	179.06	3,260.18	-3,129.99	-160.07	3,129.94	1.608	1.031	1.540
6,084.00	89.71	180.03	3,259.79	-3,192.99	-159.57	3,192.93	2.549	-2.032	-0.143
6,147.00	89.80	179.94	3,260.06	-3,255.99	-159.55	3,255.93	0.202	0.143	0.344
6,211.00	90.02	180.03	3,260.16	-3,319.99	-159.53	3,319.93	0.371	0.429	-0.413
6,223.89	90.08	179.98	3,260.15	-3,332.88	-159.53	3,332.82	0.595	0.429	-0.413
MDPT Tgt - HI Bob Fed #3H L117									
6,274.00	90.29	179.77	3,259.99	-3,382.99	-159.42	3,382.93	0.595	0.429	-0.413
6,337.00	90.24	179.50	3,259.70	-3,445.98	-159.02	3,445.93	0.436	-0.079	-0.429
6,401.00	90.37	179.50	3,259.36	-3,509.98	-158.46	3,509.92	0.203	0.203	0.000
6,464.00	90.55	179.50	3,258.85	-3,572.98	-157.91	3,572.92	0.286	0.286	0.000
6,527.00	90.86	179.33	3,258.08	-3,635.97	-157.27	3,635.91	0.561	0.492	-0.270
6,590.00	89.32	179.15	3,257.98	-3,698.96	-156.43	3,698.91	2.461	-2.444	-0.286
6,654.00	89.27	178.53	3,258.77	-3,762.94	-155.14	3,762.89	0.972	-0.078	-0.969
6,717.00	89.45	178.71	3,259.47	-3,825.92	-153.62	3,825.87	0.404	0.286	0.286
6,781.00	88.44	179.94	3,260.65	-3,889.90	-152.87	3,889.85	2.487	-1.578	1.922
6,844.00	88.88	180.03	3,262.12	-3,952.89	-152.85	3,952.83	0.713	0.698	0.143
6,907.00	89.49	180.29	3,263.02	-4,015.88	-153.03	4,015.82	1.053	0.968	0.413
6,970.00	89.80	180.47	3,263.41	-4,078.88	-153.44	4,078.82	0.569	0.492	0.286
7,034.00	88.62	180.73	3,264.29	-4,142.86	-154.11	4,142.81	1.888	-1.844	0.406
7,097.00	88.92	181.08	3,265.64	-4,205.84	-155.11	4,205.79	0.732	0.476	0.556
7,160.00	89.63	181.52	3,266.44	-4,268.82	-156.54	4,268.77	1.326	1.127	0.698
7,224.00	89.85	181.35	3,266.73	-4,332.80	-158.14	4,332.74	0.434	0.344	-0.266
7,287.00	90.29	181.61	3,266.66	-4,395.78	-159.77	4,395.72	0.811	0.698	0.413
7,350.00	90.68	181.70	3,266.12	-4,458.75	-161.59	4,458.69	0.635	0.619	0.143
7,414.00	91.03	181.61	3,265.17	-4,522.72	-163.44	4,522.66	0.565	0.547	-0.141
7,477.00	91.52	180.47	3,263.76	-4,585.69	-164.58	4,585.63	1.969	0.778	-1.810
7,540.00	90.95	180.20	3,262.41	-4,648.67	-164.95	4,648.61	1.001	-0.905	-0.429
7,604.00	89.32	178.97	3,262.26	-4,712.67	-164.48	4,712.61	3.191	-2.547	-1.922
7,667.00	89.14	178.80	3,263.10	-4,775.65	-163.26	4,775.59	0.393	-0.286	-0.270
7,731.00	89.27	179.06	3,263.99	-4,839.63	-162.06	4,839.58	0.454	0.203	0.406
7,794.00	89.32	179.24	3,264.77	-4,902.62	-161.13	4,902.56	0.297	0.079	0.286
7,857.00	89.49	179.85	3,265.42	-4,965.61	-160.63	4,965.56	1.005	0.270	0.968
7,921.00	89.71	180.38	3,265.87	-5,029.61	-160.76	5,029.56	0.897	0.344	0.828
7,984.00	89.76	180.73	3,266.16	-5,092.61	-161.37	5,092.55	0.561	0.079	0.556
8,047.00	89.93	181.00	3,266.33	-5,155.60	-162.32	5,155.54	0.506	0.270	0.429
8,111.00	89.93	181.00	3,266.41	-5,219.59	-163.43	5,219.53	0.000	0.000	0.000
8,174.00	90.15	181.35	3,266.36	-5,282.58	-164.73	5,282.52	0.656	0.349	0.556
8,238.00	90.37	181.00	3,266.07	-5,345.56	-166.04	5,345.51	0.646	0.344	-0.547

Survey Report

Company: Marshall & Winston, Inc.		Local Co-ordinate Reference:		Site HI Bob Federal #3H	
Project: Chaves County, New Mexico		TVD Reference:		Well @ 3831.30usft (Stoneham 5)	
Site: HI Bob Federal #3H		MD Reference:		Well @ 3831.30usft (Stoneham 5)	
Well: HI Bob Fed #3H		North Reference:		Grid	
Wellbore: Drilling		Survey Calculation Method:		Minimum Curvature	
Design: Surveys		Database:		EDMRESTORED	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Buid Rate (°/100ft)	Turn Rate (°/100ft)
8,301.00	90.37	179.68	3,265.67	-5,409.56	-166.41	5,409.50	2.095	0.000	-2.095
8,364.00	90.37	180.03	3,265.26	-5,472.56	-166.25	5,472.50	0.556	0.000	0.556
8,428.00	90.55	180.38	3,264.75	-5,536.56	-166.48	5,536.50	0.615	0.281	0.547
8,491.00	90.24	179.94	3,264.31	-5,599.55	-166.66	5,599.50	0.854	-0.492	-0.698
8,554.00	89.19	178.89	3,264.62	-5,662.55	-166.02	5,662.49	2.357	-1.667	-1.667
8,617.00	89.14	178.71	3,265.54	-5,725.53	-164.70	5,725.47	0.297	-0.079	-0.286
8,681.00	89.14	178.97	3,266.50	-5,789.51	-163.40	5,789.45	0.406	0.000	0.406
8,698.00	89.27	179.15	3,266.74	-5,806.50	-163.12	5,806.45	1.306	0.765	1.059
Last Alm Svy									
8,713.75	89.27	179.15	3,266.94	-5,822.25	-162.89	5,822.19	0.000	0.000	0.000
Actual LTP (8713.75MD)									
8,763.00	89.27	179.15	3,267.57	-5,871.49	-162.16	5,871.43	0.000	0.000	0.000
Projection to BHL - PBHL - HI Bob Fed #3H L117									

Survey Annotations					Local Coordinates		Comment	
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)					
1,266.00	1,265.81	15.81	6.97				Tie on Gyrodala Gyros	
1,306.00	1,305.80	16.47	7.56				First Alm Svy	
3,654.00	3,249.99	-763.73	-174.69				Actual FTP (3654.00MD)	
8,698.00	3,266.74	-5,806.50	-163.12				Last Alm Svy	
8,713.75	3,266.94	-5,822.25	-162.89				Actual LTP (8713.75MD)	
8,763.00	3,267.57	-5,871.49	-162.16				Projection to BHL	

Checked By: _____ Approved By: _____ Date: _____

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
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District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 16690

CONDITIONS OF APPROVAL

Operator:	MARSHALL & WINSTON INC	P.O. Box 50880	Midland, TX79710	OGRID:	14187	Action Number:	16690	Action Type:	C-104C
OCD Reviewer	Condition								
ksimmons	None								