

NMOC D 98

New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

Form 3160-3
(August 2007)

FEB 11 2011

HOBBSOCD UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

5. Lease Serial No.
NMNM 125172

6. If Indian, Allottee, or Tribe Name
N/A

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator
Marshall & Winston Incorporated

3a. Address
P.O. Box 50880

3b. Phone No. (include area code)
(432) 684-6373

4. Location of Well (Report location clearly and in accordance with any State requirements.)

At surface (U/L "D") 660' FNL & 330' FWL

At proposed prod. zone (U/L "A") 660' FNL & 330' FEL

14. Distance in miles and direction from nearest town or post office:

N/A Plats included

12. County or Parish
Chaves

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any)
BL is 330' west, 660' south and 330' east of State minerals.

16. No. of acres in lease
320.00

17. Spacing Unit dedicated to this well
160.00

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
No other wellbores on this lease.

19. Proposed Depth
est. 8700' - 8900'

20. BLM/BIA Bond No. on file
NM 0877

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
4358' GL

22. Approximate date work will start*
12/01/2010

23. Estimated duration
30 - 45 days

24. Attachments

ROSWELL CONTROLLED WATER BASIN

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature
Vernon D. Dyer

Name (Printed Typed)
Vernon D. Dyer

Date
11/12/2010

Title
Agent.
Note: For any necessary changes regarding this APD, please contact Vernon Dyer at (575) 432-0355 or Gary Goutley at (575) 623-5880

Approved by (Signature)
Angel Mayes

Name (Printed Typed)
Angel Mayes

Date
FEB 09 2011

Title
Assistant Field Manager,
Lands And Minerals

Office
ROSWELL FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVED FOR 2 YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

DECLARED WATER BASIN

CLAIMANT BEHIND THE 133'
CASSING MUST BE CIRCULATED

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS ATTACHED

RECEIVED
BUREAU OF LAND MANAGEMENT
2010 NOV 12 AM 10:00
(Instructions on page 2)

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

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

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410

DISTRICT IV
11885 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
11885 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

RECEIVED

FEB 11 2011

HOBBSOCD

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-005-29176	Pool Code 97715	Pool Name Wildcat Abo - Wolfcamp
Property Code 38492	Property Name CACTUS FEDERAL (25)	Well Number 1H
GRID No. 14187	Operator Name MARSHALL & WINSTON, INC.	Elevation 4359'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	25	15-S	31-E		735	NORTH	330	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
A	25	15-S	31-E		660	NORTH	330	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

	<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><i>Vernon D. Dyer</i> 1-6-2011 Signature Date VERNON D. DYER Printed Name</p>
<p>GEODETIC COORDINATES NAD 27 NML</p> <p>SURFACE LOCATION Y=725073.6 N X=669008.8 E LAT.=33.992079° N LONG.=103.782120° W</p> <p>BOTTOM HOLE LOCATION Y=725195.3 N X=673634.0 E</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></p> <p>Date Surveyed: 12/29/2010 Signature & Seal of Professional Surveyor <i>Ronald J. Eidson</i> 10.11.1892</p> <p>Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>

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Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

11885 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name CACTUS FEDERAL 25	Well Number 1H
OGRID No.	Operator Name MARSHALL & WINSTON, INC.	Elevation 4359'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	25	15-S	31-E		735	NORTH	330	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
A	25	15-S	31-E		660	NORTH	330	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>ANTICIPATED Penetration Point = 635' FWL Re: 1st Perfs</p> <p>GRID AZ = 88°29'30" HORIZ. DIST. = 4627.9'</p> <p>S.L. SEE DETAIL</p> <p>DETAIL</p> <p>4355.5' 4360.5'</p> <p>600'</p> <p>4349.2' 4360.6'</p>		<p>B.H. 330'</p>	
<p>GEODETIC COORDINATES NAD 27 NME</p> <p>SURFACE LOCATION Y=725073.6 N X=669008.8 E</p> <p>LAT.=33.992079° N LONG.=103.782120° W</p> <p>BOTTOM HOLE LOCATION Y=725195.3 N X=673634.0 E</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 _____ Date _____</p> <p>Printed Name _____</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>RONALD J. EIDSON DECEMBER 21, 2010</p> <p>Date Surveyed 12/29/2010 LA</p> <p>Signature & Seal of Professional Surveyor</p> <p>Ronald J. Eidson 10.11.1892</p>		<p>Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>	

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications.

Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FEB 11 2011

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.5. Lease Serial No.
NMNM 125172
6. If Indian, Allottee or Tribe Name
N/A

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator Marshall & Winston Incorporated

3a. Address P.O. Box 50880

3b. Phone No. (include area code)
(432) 684-6373

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 25 T. 15 S. R. 31 E.

SHL 735' FNL, 330' FWL
BHL 660' FNL, 330' FEL7. If Unit of CA/Agreement, Name and/or No.
N/A8. Well Name and No.
CACTUS FED 251-H9. API Well No.
30-045-005-2917610. Field and Pool or Exploratory Area
Wildcat Abo-Wolfcamp (Pool # 97715)11. Country or Parish, State
Chaves Co. NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Move location re-
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	commended by BLM
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	J. Reese, M. McGee

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

This well is intended to be horizontal, it is located in the N/2 N/2 of Section 25, T. 15 S., R. 31 E.

The original survey and surface hole location for this well was proposed and staked at U/L "D" 660' FNL & 330' FWL.
The BHL is anticipated to be at U/L "A" 660' FNL & 330' FEL.

During an onsite inspection, it was recommended from BLM representatives, Jared Reese and Mike McGee to move well site 75 feet to the South to avoid any potential of runoff or or other unforeseen surface contamination of playas terrain.

The well pad has been re-surveyed and the Surface hole location moved to 75 feet to the south at 735' FNL, 330' FWL. The bottom hole location remains unchanged at 660' FNL and 330' FEL.

The access road has been relocated from the north west corner of the arch boundary & pad entry to the north east side of Arched boundry onto well pad.
SEE ATTACHED : 1) C-102 NMOCD Form

2) 600 x 600 boundry and proposed access road survey.

3) Location Verification Map

4) Vicinity Map

--Should you have any further requirements or changes necessary, please contact Vernon D. Dyer at (575) 432-0355 or Gary Gourley at (575) 623-5880.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

VERNON D. DYER

Title Agent for Marshall & Winston Inc.

Signature

Date 01/06/2011

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

DRILLING PROGNOSIS
MARSHALL & WINSTON, INC.

CACTUS FEDERAL 25-1H
CHAVES COUNTY, NEW MEXICO

LOCATION:

SH: 660' FNL & 330' FWL, Sec. 25, T-15-S, R-31-E, Chaves County, New Mexico.

BH: 660' FNL & 330' FWL, Sec. 25, T-15-S, R-31-E, Chaves County, New Mexico.

ELEVATION: 4358' GL

GEOLOGIC NAME OF SURFACE FORMATION: Quaternary Alluvium Deposits

PROPOSED TD: Lower Abo 8,860', TVD 13,252'

SURFACE OWNER: Shannon Kizer, POB 56, Pep, NM 88216, (575) 675-2321

BLM LEASE NO.: NMNM 125172, Lessee: Marshall and Winston Incorporated, 320 acres

API NUMBER: 30-005-

DRILLING CONTRACTOR: Patterson Drilling Company

DIRT CONTRACTOR: Badger BMB Services, Lewis Sparkman (575) 706-6684

CEMENTING SERVICES: BJ Services, Artesia (575) 746-3140

DRILLING MUD AND EQUIPMENT: MI Swaco, Todd Passmore, (432) 238-9560,
CLS, Mike Harrington, (432) 425-6622

CASING: Trident, Ryan Hunt (7", 4 ½ "), (314) 852-7281, Gulf Coast Tubulars, Morgan
Nelson (13-3/8", 9-5/8"), (214) 232-7272

MUDLOGGER: Selman & Associates, Tom Selman 561-9808, tselman@selmanlog.com

DST: Rig Testers

OPENHOLE LOGS: Schlumberger

WELLHEAD EQUIPMENT: Downing Wellhead, Inc. (432) 687-0778 David

WATER HAULER: VMJ Services. Frank (575) 602-8551

SOLIDS DISPOSAL: Gandy Corporation, Wayne Tramell, Office (575) 370-2480,
Cell (575) 370-4560

WATERLINE: Fasline

FLOAT EQUIPMENT: S & K Float Equipment Judson Bennett (432) 631-6301

LINER HANGER: TIW, Jimmy Stringer (432) 528-3494

DRILLING PROCEDURE:

1. Set 40' of 20" conductor pipe and cement to surface.
2. MIRU Patterson 46. ***Notify BLM – Roswell of intent to spud and of all casing, cementing and BOP tests.***
3. Drill 17 ½" hole and set 13 3/8" casing at 350' & cement to surface per BJ well recommendation. Notify BLM if cement does not circ. to surface.
4. Wait on cement for 18 hrs. NU 1500# casing head and BOP. Test head to 2,000#. Test BOP to 2,000#.
5. Mudlogger will be on hole at about 2500' MD.
6. Drill 12 ¼" hole and set 9 5/8" casing to 3950'. Run 9 5/8" J-55 40# from bottom to 2500' and then run 36# from 2500' to surface.
7. Cement 9-5/8" casing to surface per BJ well recommendation. Notify BLM if cement does not circ. to surface.
8. Rig up H2S equipment.
9. Drill 8 ¾" hole to approximately 8900' TVD. [Probable DST in Lower Abo carbonate.]
10. Run Open Hole Logs from 8900' to intermediate casing.
11. When logs are run successfully set open hole whip stock at about 8408' with reference to caliper logs and kick off curve.
12. Trip out of hole and make up 8 ¾" directional BHA to build curve.
13. Trip in hole and build curve at 8408' unless changed due to open hole logs.
14. Drill curve and land at 8790' TVD 9002' TMD will adjust in accordance with logs.
15. Run 7" casing from top to bottom and cement to surface as per BJ well recommendation.
16. Drill a 6 1/8" hole to TD, 8860' TVD 13252 MD. (TVD will vary with Shows)
17. Run 4 ½" liner with liner hanger set at 8850' MD (150' above EOC).

DIRECTIONS TO LOCATION:

From the intersection of St. Hwy 249 and St. Hwy 172 (Hagerman/Caprock highways), go south approximately 1.6 miles, turn east-NE and go approximately 0.6 miles, veer east approximately 0.6 miles. The location is staked 1400 feet to the south.

DRILLING PLAN

1. **GEOLOGICAL NAME OF SURFACE FORMATION:** Quaternary Alluvium Deposits

2. **ANTICIPATED FORMATION TOPS:**

Surface Water	295'
San Andres	4,058'
Glorieta	5,598'
Tubb	6,968'
Abo	7,668'
Base of Lower Abo	8,998'

No unusual high pressures or H₂S is anticipated to be encountered. However, a H₂S contingency plan will be incorporated prior to drilling below the 9 5/8" casing. The H₂S contingency plan is included in this APD.

3. **CASING PROGRAM:**

O.D., In	Depth, MD	Weight, Lb/ft	Grade	Conn.	Pw Collapse Psi	Pw Burst Psi	Pw Tension, Kips	Test, Psi
13-3/8"	Surface To 350'	54.5	J-55	STC	1,130	1,730	322	N/A
9-5/8"	Surface To 3950'	40.0	J-55	LTC	2,570	3,950	630	1,500
7"	Surface To 6,000,	23.0	N-80	LTC	3,830	6,340	442	1,500
7"	6,000' To 9,002'	26.0	N-80	LTC	5,410	7,240	519	1,500
4 1/2 "	8,850' To 13,252	11.6	P-110	LTC	7,560	10,690	279	1,500

Safety Factors and Requirements: Collapse 1.125, Burst 1.0, Tension 1.8:

<u>Size Casing</u>	<u>Collapse</u>	<u>Burst</u>	<u>Tension</u>
13.385 "	1.3	4.09	4.25
9.625 "	1.21	2.38	4.25
7.0 "	1.29	3.11	2.79
4.5 "	1.18	3.34	1.74

4. **CEMENTING PROGRAM:** → SEE SWACO'S Cementing Design Attached.

5. **PRESSURE CONTROL:** Patterson rig will install on the 13 3/8" surface casing, a 5,000 psi rated casing head and BOPE. Prior to drilling out of the 13 3/8" shoe, we will test the casing head to 2,000 psi and test the BOP to 2,000 psi using a third party. Prior to drilling beyond the 9 5/8" shoe the BOPE shall be tested to 5,000 psi by a third party. Prior to drilling out of 7" casing shoe, the BOPE shall be tested to 5,000 psi. Testing the BOPE shall be done in accordance as per Onshore Orders.

→ SEE BOPE, Choke, Closed Loop & Attaching Line(s) Schematics attached.

6. **DRILLING FLUID PROGRAM:**

The anticipated mud program is as follows:

0 - 350'	Fresh water mud	8.4 - 8.6 PPG
350' - 3950'	Brine water	8.6 -10.0 PPG
3950' - 9002'	Fresh water & Brine	8.4 - 9.5 PPG
9002' - 13,252'	Duo-Vis	9.0 - 9.4 PPG

The mud circulation system will utilize a Closed Loop System. The original C-144 OCD Form is submitted to the NMOCD Office, District I, Hobbs, NM.

➔ SEE SWACO'S Closed Loop Diagram attached.

7. **AUXILIARY EQUIPMENT:** None.

8. **LOGGING PROGRAM:**

Mud Logging will 2 man unit from 2500' to TD.

Electrical logging will include CNL / LDT / CAL / GR, DLL / GR

9. **POTENTIAL HAZARDS:** No abnormal pressures or temperatures are anticipated. (BHP is estimated to be 4000 psi and the BHT is estimated to be 175 deg F).

This area may have a potential for H2S and the following measures will be taken:
An H2S contingency plan according to Onshore Orders will be incorporated by a third party prior to drilling out of the intermediate 9 5/8" shoe. This includes that:

- All personnel will be H2S trained and qualified.
- H2S alarms and detection systems will be utilized.
- A windsock will be visible at all times.
- Flags or warning signs will be visible for road traffic.

➔ The H2S contingency plan is attached.

10. **ANTICIPATED START DATE:** We will start as soon as the APD is approved or on December 6, 2010 or thereabouts.
11. **SURFACE AND MINERALS OWNERSHIP:** The surface land is privately owned by Shannon Kizer, POB 56, Pep, NM 88216, (575) 675-2321. The minerals are owned by the United States and managed by the Bureau of Land Management.

MARSHALL & WINSTON'S COMPANY PERSONNEL:

Shorty Sweeden (Wellsite Supervisor) (432) 634-8722

Gabe Herrera (Marshall & Winston – Engineer) (432) 684-6373 (office)
(432) 260-8650 (cell)

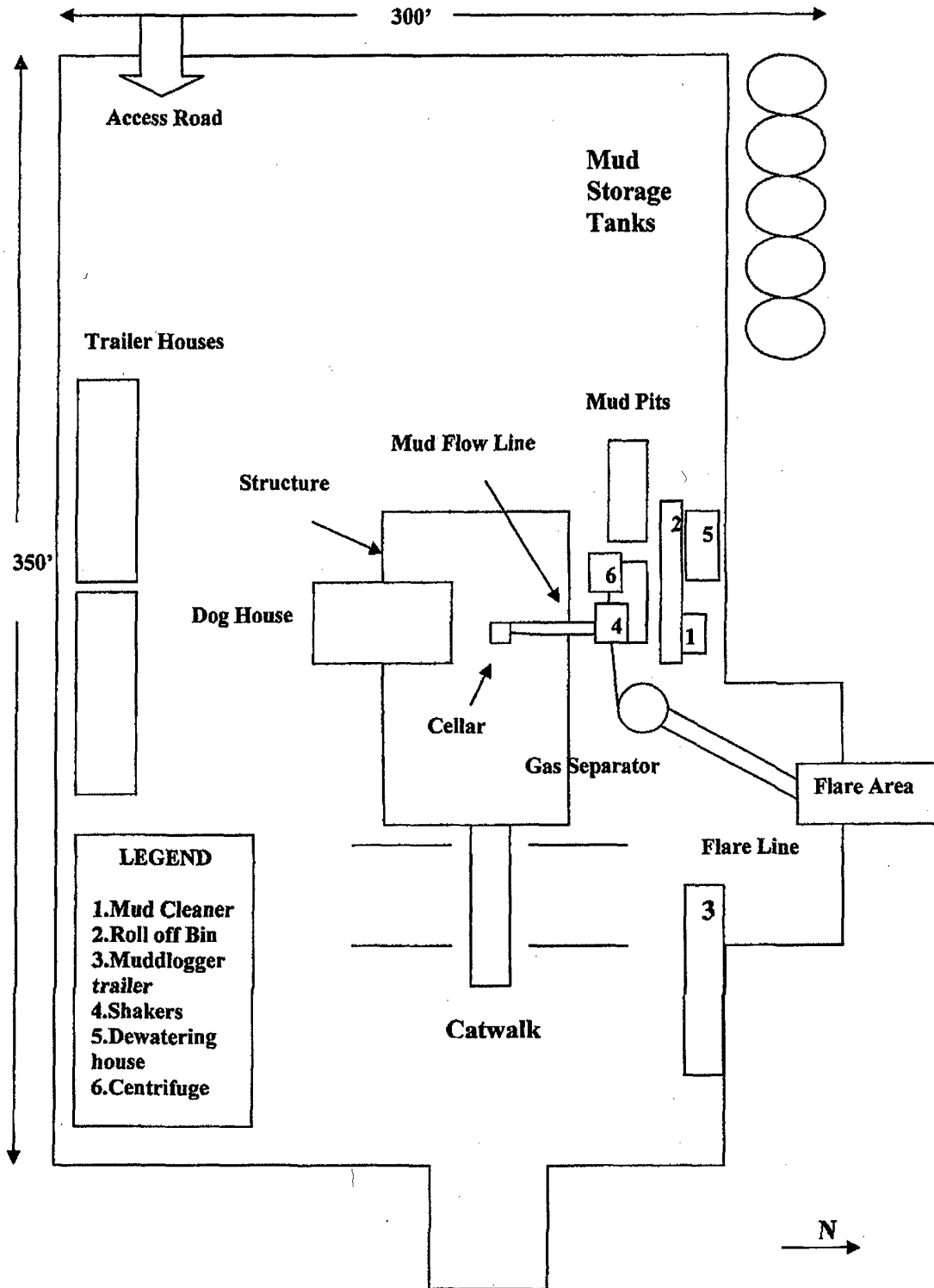
Tom Brandt (Marshall & Winston – Operations) (432) 684-6373 (office)
(432) 553-9747 (cell)

George Watters (Marshall & Winston – Geologist) (432) 684-6373 (office)
(432) 631-2051 (cell)

Marshall & Winston, Inc.
P.O. Box 50880
Midland, Tx. 79710-0880

(432) 684-6373 Office
(432) 687-2684 Fax

RIG PLAT



BOP STACK SPACING
SIZE: 11" X 3,000 PSI

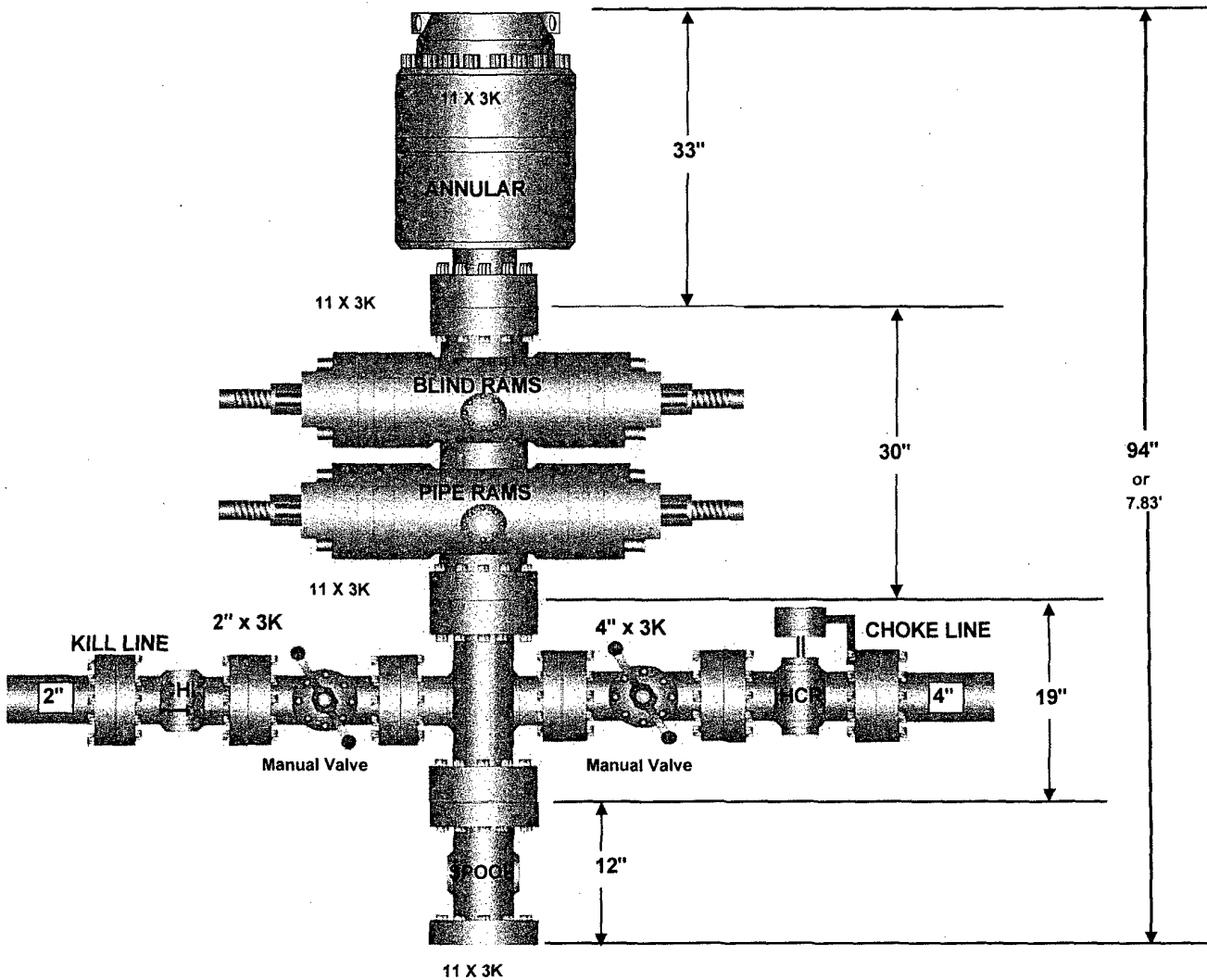


Exhibit 8, 5M BOP

5,000 PSI CHOKE MANIFOLD

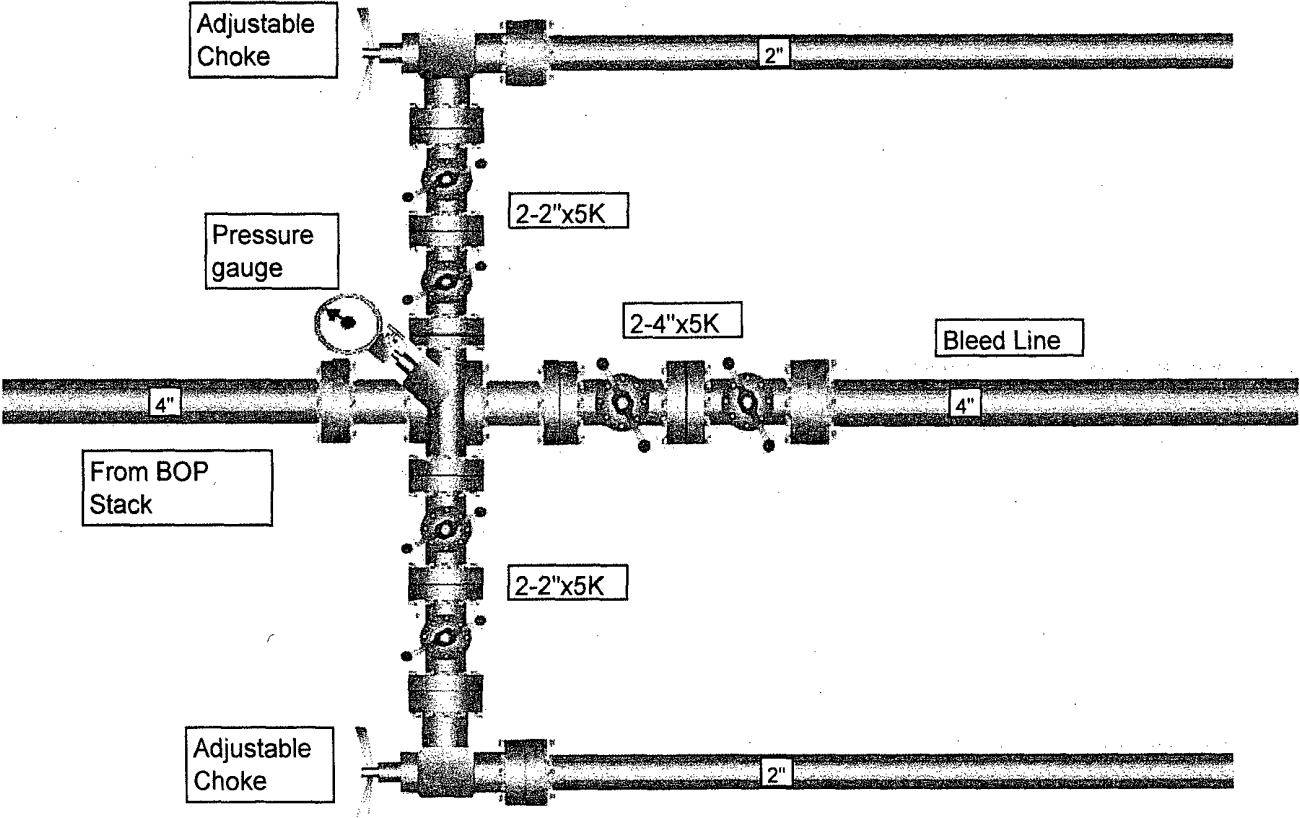
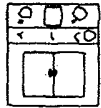


Exhibit 8.2 Choke

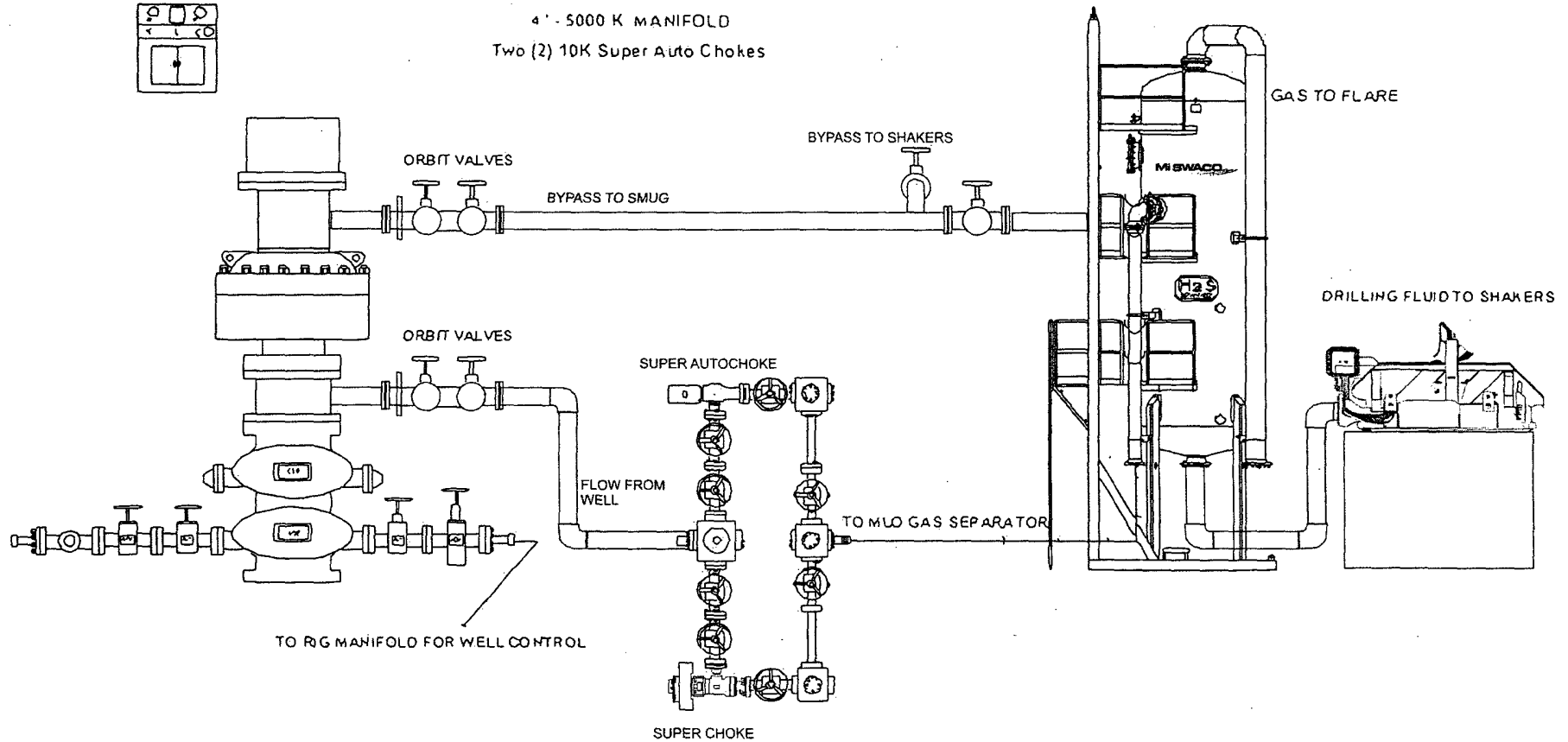
Dual Choke Operating Console
Located on Rig Floor



Managed Pressure Control

4" - 5000 K MANIFOLD

Two (2) 10K Super Auto Chokes



Mi SWACO



Project: Chaves (NM27)
 Site: Sec 25 - T15S - R31E
 Well: Cactus Federal 25 #1H
 Wellbore: Wellbore #1
 Design: Plan #1



Azimuths to Grid North
 Total Correction: 7.51°
 Magnetic Field
 Strength: 49181.4snT
 Dip Angle: 60.90°
 Date: 10/15/2010
 Model: IGRF200510



ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
8408.0	8408.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP 15°/100 DLS @ 89.42° AZI
8789.9	9001.7	89.06	89.42	3.8	375.7	375.7	375.7	EOC - Hold to TD
8860.0	13252.3	89.05	89.42	46.8	4625.5	4625.7	4625.7	TD at 13252.3

WELL DETAILS: Cactus Federal 25 #1H

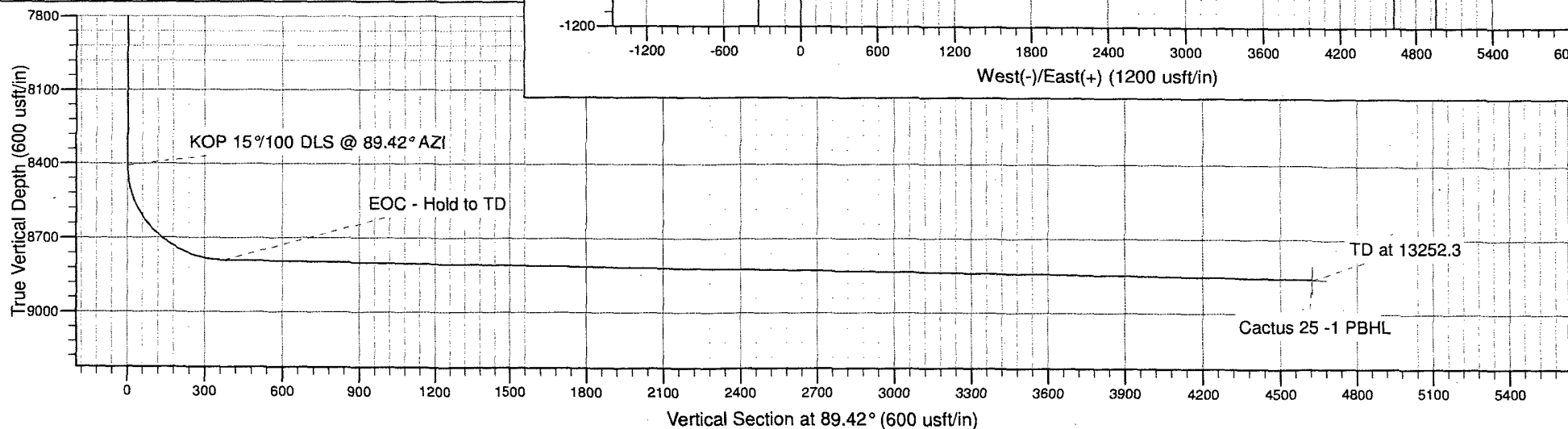
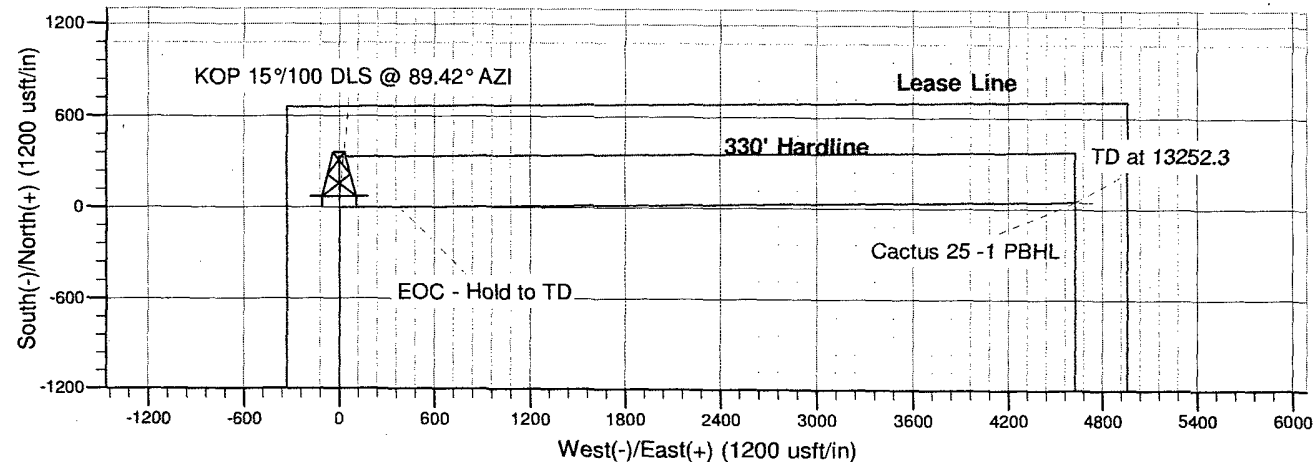
Ground Level: 0.0	Latitude	Longitude
Easting	32° 59' 32.225 N	103° 46' 55.633 W
669008.50		
SHL: 660' FNL / 330' FEL		
BHL: 660' FNL / 330' FWL		

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Cactus 25 -1 PBHL	8860.0	46.8	4625.5	725195.30	673634.00	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	8408.0	0.00	0.00	8408.0	0.0	0.0	0.00	0.00	0.0	
3	9001.7	89.06	89.42	8789.9	3.8	375.7	15.00	89.42	375.7	
4	13252.3	89.05	89.42	8860.0	46.8	4625.5	0.00	175.86	4625.7	Cactus 25 -1 PBHL





Marshall & Winston

Chaves (NM27)

Sec 25 - T15S - R31E

Cactus Federal 25 #1H

Wellbore #1

Plan: Plan #1

Standard Planning Report

15 October, 2010



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Sec 25 - T15S - R31E
Company:	Marshall & Winston	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Project:	Chaves (NM27)	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 25 - T15S - R31E	North Reference:	Grid
Well:	Cactus Federal 25 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project	Chaves (NM27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Sec 25 - T15S - R31E		
Site Position:		Northing:	725,148.50 usft
From:	Map	Easting:	669,008.50 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 59' 32.225 N
		Longitude:	103° 46' 55.633 W
		Grid Convergence:	0.30 °

Well	Cactus Federal 25 #1H		
Well Position	+N/-S	0.0 usft	Northing: 725,148.50 usft
	+E/-W	0.0 usft	Easting: 669,008.50 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 32° 59' 32.225 N
			Longitude: 103° 46' 55.633 W
			Ground Level: 0.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/15/10	7.81	60.90	49,181

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	89.42

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
8,408.0	0.00	0.00	8,408.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,001.7	89.06	89.42	8,789.9	3.8	375.7	15.00	15.00	0.00	89.42	
13,252.3	89.05	89.42	8,860.0	46.8	4,625.5	0.00	0.00	0.00	175.86	Cactus 25 -1 PBHL

Database: EDM 5000.1 Single User Db
Company: Marshall & Winston
Project: Chaves (NM27)
Site: Sec 25 - T15S - R31E
Well: Cactus Federal 25 #1H
Wellbore: Wellbore #1
Design: Plan #1

Local Co-ordinate Reference: Site Sec 25 - T15S - R31E
TVD Reference: WELL @ 0.0usft. (Original Well Elev)
MD Reference: WELL @ 0.0usft. (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned 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)
8,408.0	0.00	0.00	8,408.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP 15°/100 DLS @ 89.42° AZI									
8,425.0	2.55	89.42	8,425.0	0.0	0.4	0.4	15.00	15.00	0.00
8,450.0	6.30	89.42	8,449.9	0.0	2.3	2.3	15.00	15.00	0.00
8,475.0	10.05	89.42	8,474.7	0.1	5.9	5.9	15.00	15.00	0.00
8,500.0	13.80	89.42	8,499.1	0.1	11.0	11.0	15.00	15.00	0.00
8,525.0	17.55	89.42	8,523.2	0.2	17.8	17.8	15.00	15.00	0.00
8,550.0	21.30	89.42	8,546.8	0.3	26.1	26.1	15.00	15.00	0.00
8,575.0	25.05	89.42	8,569.7	0.4	35.9	35.9	15.00	15.00	0.00
8,600.0	28.80	89.42	8,592.0	0.5	47.2	47.2	15.00	15.00	0.00
8,625.0	32.55	89.42	8,613.5	0.6	60.0	60.0	15.00	15.00	0.00
8,650.0	36.30	89.42	8,634.1	0.8	74.1	74.1	15.00	15.00	0.00
8,675.0	40.05	89.42	8,653.8	0.9	89.6	89.6	15.00	15.00	0.00
8,700.0	43.80	89.42	8,672.4	1.1	106.3	106.3	15.00	15.00	0.00
8,725.0	47.55	89.42	8,689.8	1.3	124.2	124.2	15.00	15.00	0.00
8,750.0	51.30	89.42	8,706.1	1.4	143.1	143.1	15.00	15.00	0.00
8,775.0	55.05	89.42	8,721.1	1.7	163.1	163.2	15.00	15.00	0.00
8,800.0	58.80	89.42	8,734.7	1.9	184.1	184.1	15.00	15.00	0.00
8,825.0	62.55	89.42	8,747.0	2.1	205.9	205.9	15.00	15.00	0.00
8,850.0	66.30	89.42	8,757.8	2.3	228.4	228.4	15.00	15.00	0.00
8,875.0	70.05	89.42	8,767.0	2.5	251.6	251.6	15.00	15.00	0.00
8,900.0	73.80	89.42	8,774.8	2.8	275.4	275.4	15.00	15.00	0.00
8,925.0	77.55	89.42	8,781.0	3.0	299.6	299.6	15.00	15.00	0.00
8,950.0	81.30	89.42	8,785.6	3.3	324.2	324.2	15.00	15.00	0.00
8,975.0	85.05	89.42	8,788.5	3.5	349.0	349.0	15.00	15.00	0.00
9,001.7	89.06	89.42	8,789.9	3.8	375.7	375.7	15.00	15.00	0.00
EOC - Hold to TD									
9,100.0	89.06	89.42	8,791.5	4.8	473.9	474.0	0.00	0.00	0.00
9,200.0	89.06	89.42	8,793.2	5.8	573.9	573.9	0.00	0.00	0.00
9,300.0	89.06	89.42	8,794.8	6.8	673.9	673.9	0.00	0.00	0.00
9,400.0	89.06	89.42	8,796.5	7.8	773.9	773.9	0.00	0.00	0.00
9,500.0	89.06	89.42	8,798.1	8.8	873.9	873.9	0.00	0.00	0.00
9,600.0	89.06	89.42	8,799.7	9.9	973.8	973.9	0.00	0.00	0.00
9,700.0	89.06	89.42	8,801.4	10.9	1,073.8	1,073.9	0.00	0.00	0.00
9,800.0	89.06	89.42	8,803.0	11.9	1,173.8	1,173.9	0.00	0.00	0.00
9,900.0	89.06	89.42	8,804.7	12.9	1,273.8	1,273.9	0.00	0.00	0.00
10,000.0	89.06	89.42	8,806.3	13.9	1,373.8	1,373.8	0.00	0.00	0.00
10,100.0	89.06	89.42	8,808.0	14.9	1,473.7	1,473.8	0.00	0.00	0.00
10,200.0	89.06	89.42	8,809.6	15.9	1,573.7	1,573.8	0.00	0.00	0.00
10,300.0	89.06	89.42	8,811.3	16.9	1,673.7	1,673.8	0.00	0.00	0.00
10,400.0	89.06	89.42	8,812.9	18.0	1,773.7	1,773.8	0.00	0.00	0.00
10,500.0	89.06	89.42	8,814.5	19.0	1,873.7	1,873.8	0.00	0.00	0.00
10,600.0	89.06	89.42	8,816.2	20.0	1,973.7	1,973.8	0.00	0.00	0.00
10,700.0	89.06	89.42	8,817.8	21.0	2,073.6	2,073.7	0.00	0.00	0.00
10,800.0	89.06	89.42	8,819.5	22.0	2,173.6	2,173.7	0.00	0.00	0.00
10,900.0	89.06	89.42	8,821.1	23.0	2,273.6	2,273.7	0.00	0.00	0.00
11,000.0	89.06	89.42	8,822.8	24.0	2,373.6	2,373.7	0.00	0.00	0.00
11,100.0	89.06	89.42	8,824.4	25.0	2,473.6	2,473.7	0.00	0.00	0.00
11,200.0	89.06	89.42	8,826.1	26.0	2,573.5	2,573.7	0.00	0.00	0.00
11,300.0	89.05	89.42	8,827.7	27.1	2,673.5	2,673.7	0.00	0.00	0.00
11,400.0	89.05	89.42	8,829.4	28.1	2,773.5	2,773.6	0.00	0.00	0.00
11,500.0	89.05	89.42	8,831.0	29.1	2,873.5	2,873.6	0.00	0.00	0.00
11,600.0	89.05	89.42	8,832.7	30.1	2,973.5	2,973.6	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Sec 25 - T15S - R31E
Company:	Marshall & Winston	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Project:	Chaves (NM27)	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 25 - T15S - R31E	North Reference:	Grid
Well:	Cactus Federal 25 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned 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)
11,700.0	89.05	89.42	8,834.3	31.1	3,073.4	3,073.6	0.00	0.00	0.00
11,800.0	89.05	89.42	8,836.0	32.1	3,173.4	3,173.6	0.00	0.00	0.00
11,900.0	89.05	89.42	8,837.6	33.1	3,273.4	3,273.6	0.00	0.00	0.00
12,000.0	89.05	89.42	8,839.3	34.1	3,373.4	3,373.6	0.00	0.00	0.00
12,100.0	89.05	89.42	8,840.9	35.1	3,473.4	3,473.6	0.00	0.00	0.00
12,200.0	89.05	89.42	8,842.6	36.2	3,573.4	3,573.5	0.00	0.00	0.00
12,300.0	89.05	89.42	8,844.2	37.2	3,673.3	3,673.5	0.00	0.00	0.00
12,400.0	89.05	89.42	8,845.9	38.2	3,773.3	3,773.5	0.00	0.00	0.00
12,500.0	89.05	89.42	8,847.5	39.2	3,873.3	3,873.5	0.00	0.00	0.00
12,600.0	89.05	89.42	8,849.2	40.2	3,973.3	3,973.5	0.00	0.00	0.00
12,700.0	89.05	89.42	8,850.9	41.2	4,073.3	4,073.5	0.00	0.00	0.00
12,800.0	89.05	89.42	8,852.5	42.2	4,173.2	4,173.5	0.00	0.00	0.00
12,900.0	89.05	89.42	8,854.2	43.2	4,273.2	4,273.4	0.00	0.00	0.00
13,000.0	89.05	89.42	8,855.8	44.2	4,373.2	4,373.4	0.00	0.00	0.00
13,100.0	89.05	89.42	8,857.5	45.3	4,473.2	4,473.4	0.00	0.00	0.00
13,200.0	89.05	89.42	8,859.1	46.3	4,573.2	4,573.4	0.00	0.00	0.00
13,252.3	89.05	89.42	8,860.0	46.8	4,625.5	4,625.7	0.00	0.00	0.00
TD at 13252.3 - Cactus 25 -1 PBHL									

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Cactus 25 -1 PBHL	0.00	0.00	8,860.0	46.8	4,625.5	725,195.30	673,634.00	32° 59' 32.445 N	103° 46' 1.323 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,408.0	8,408.0	0.0	0.0	KOP 15°/100 DLS @ 89.42° AZI
9,001.7	8,789.9	3.8	375.7	EOC - Hold to TD
13,252.3	8,860.0	46.8	4,625.5	TD at 13252.3