

This 3160-3 has been amended on 11/15/2011 to satisfy the deficiency notification dated 11/02/2011 regarding the APD. ATS-12-80

Form 3160-3
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
APR 4 2012
NMOCD ARTESIA

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. SH: NM-0455265, BH: NM 019431	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator: Marshall & Winston Inc. [14187]		7. If Unit or CA Agreement, Name and No.	
3a. Address: P.O. Box 50880 Midland, TX 79710-0880		8. Lease Name and Well No. Angel Ranch Fed Com 44-1H [39148]	
3b. Phone No. (include area code) (432) 684-6373		9. API Well No. 30-015-44147 40147	
4. Location of Well (Report location clearly and in accordance with any State requirements*) At surface: 330' FSL & 660' FWL, Sec 11-M At proposed prod. zone: 330' FNL & 660' FWL, Sec 11-D		10. Field and Pool, or Exploratory Wildcat Bone Springs [96403]	
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area Section 11, T 20 S, R 27 E	
15. Distance from proposed* location to nearest property or lease line, ft. SH & BHL 660' east of NM 125141 of sec 10, 20S, R27E (Also to nearest drig. unit line, if any)		12. County or Parish Eddy	
16. No. of acres in lease 2,123.190		13. State NM	
17. Spacing Unit dedicated to this well 160 acres			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.		19. Proposed Depth Pilot 8800, TVD 6200 MD 10,616	
20. BLM/BIA Bond No. on file BLM# NMB 000807			
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 337' GL		22. Approximate date work will start* 01/05/2012	
23. Estimated duration 30-45 days			

24. Attachments

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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20, above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 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) | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature	Name (Printed/Typed) Vernon D. Dyer	Date 10/18/2011
---------------	--	--------------------

Title
Agent. Please contact Mr. Dyer for necessary amendments, (575) 420-0355; Vdyeroll@cableone.com; POB 1692, Roswell, NM 88202

Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) APR - 3 2012
---	--------------------------------------

Title FIELD MANAGER	Office CARLSBAD 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.

APPROVAL FOR TWO 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)

*(Instructions on page 2)

ROSWELL CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

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
11585 S. ST. FRANCIS DR., SANTA FE, NM 87505

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 July 16, 2010
Submit to Appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30 -015 - 14147	Well Code 96403	Pool Name Wildcat Bone Springs
Property Code 39148	Property Name ANGEL RANCH FEDERAL COM 11	Well Number 1H
OGRID No. 014187	Operator Name MARSHALL & WINSTON, INC.	Elevation 3371'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	11	20-S	27-E		330	SOUTH	660	WEST	EDDY

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
D	11	20-S	27-E		330	NORTH	660	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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

	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 undivided 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. Signature _____ Date _____ Vernon D. Dyer Printed Name Vdyeroil@cableone.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. AUGUST 24, 2011 Date of Survey Signature & Seal of Professional Surveyor: Certificate Number: Gary G. Eidson 12641 Ronald J. Eidson 3239 LA _____ WSC W.O.: 11.11.1705

Lessee's or Operator's Representative and Certification

As required for APD approval in accordance to Onshore Orders 1,
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route: that I am familiar with the conditions which currently exist; that the statements made in this plan are, the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Marshall & Winston Incorporated and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of false statement.

Name and Title: Simon D. Dye, Agent Dated: 10-18-2011

RE: Angel Ranch Fed Com #11 - 1H, Section 11, T. 20 S., R. 27 E., Eddy Co., NM

October 18, 2011
Jim Amos
BLM CFO

Re: Marshall and Winston Inc., Angel Ranch 11-1H, Interim Restoration

Mr. Amos:

Marshall & Winston wishes to keep the original pad size on the Angel Ranch 11-1H ~~350'~~^{300'} located W/2 of Section 11, T.20S, R27E, Eddy County. The actual measured size is ~~350'~~^{300'} x ~~292'~~^{292'}, commonly referred to as (I.e. 350' x 300'). We have no immediate plans for interim restoration regarding the removal of pad base material or caliche. The plans are to maintain the dimensions in order to sufficiently operate this well in addition to the Angel Ranch Fed Com 11-2H. This location shall be the central battery for both wells. The Angel Fed Com 11-2H is located on the same lease in the adjacent 160 acres to the west of the same section. The 11-2H locations will be cut down in size in regards to interim restoration as its storage and production facilities will be incorporated at the 11-1H site.

TEN
1/31/12

Utilizing a single battery production facility location for two or more wells will significantly reduce surface disturbance. Final restoration will be held at a minimum and prove more efficient for the operator and BLM as well. By consolidating production facilities and minimizing surface disturbance would be in the best interest to public lands and efficiency for operations and future restoration.

In reference to the well pad map, note there is 150' between the Heater Treater and any oil tank and the north and east sides of the location are open for workover operations. Should you have any further concerns, please contact me without any delay.

Sincerely,

Gary Gourley (575) 623-5880
Or
Vernon Dyer (575) 420-0355

DRILLING PROGRAM
Marshall & Winston Inc.
Angel Ranch Fed Com 11 # 1H
SHL (M) to BHL (D),
Sec.11, T-20S, R-27E

1. Geological Name of Surface Formation:

a. Permian Quaternary Alluvium Deposits

2. Anticipated Tops of Geological Markers & Depth of anticipated Fresh Water, Oil or Gas:

Surface water *	155'	
Queen	860'	n/a
San Andres	1900'	n/a
Delaware	2555'	n/a
Bone Springs	3920'	
Bone Springs 1 st Sand	6000'	oil
Bone Springs 2 nd Sand	6550'	
Bone Springs 3 rd Sand	7935'	
Wolfcamp	8550'	n/a
TD (pilot hole)	8800'	
TVD	6100'	6200

No other formations are anticipated to yield oil, gas or water in measureable volumes.

*According to the state engineer, the closest water well is two miles to the east in the SE/4 of sec 9. It has a depth of 155 ft. and is used for stock. There is no record if the well is still making water or the output of water capacity known.

There is no indication of the "Rustler" Anhydrite layer in the vicinity offsets. Although mixtures of anhydrite, shale, dolomite, sandstone and limestone conglomerates exist from surface throughout.

3. Casing Program:

All casing is new, and API approved. The minimum safety factors required are:
Collapse 1.125, Burst 1.0, Tension 1.8. The casing design factors for this string are:

Hole	Casing	Depth	Wt.	Grade	Type	PSI			Safety Factors		
						Collapse	Burst	Jt.Yield	Cllps.	Brst.	Jt.Yld.
17 1/2	13 3/8	450'	48	H-40	STC	740	1730	322 kips	3.36	2.5	15
12 1/4	9 5/8	3100'	36	J-55	LTC	2020	3520	423 "	1.22	1.8	3.75
8 3/4	7.0	6400'	26	N-80	LTC	5410	7249	519 "	1.77	5.14	3.12
7 7/8	5 1/2	10616'	17	P-110	LTC	7560	10,690	279 "	2.47	3.79	3.8

Summary of drilling program:

Drill a 17 1/2" hole and set 13 3/8" casing at 450' and circulate cement to surface according to Baker Hughes' recommendations.

Drill 12 1/4" hole and set 9 5/8" intermediate casing string to 3100' and circulate cement to surface according to Baker Hughes' recommendations.

Rig up H2S equipment.

Drill 8 3/4" hole to approximately 8800'. Possible DST in the Bone Spring carbonate. Run Open Hole logs from 8800' to intermediate casing.

TIH with DP displace pilot hole with 9.0 ppg laden mud, set open hole cement plug #1 from 8800' (TD) to 8315' to cover the Wolfcamp. WOC, tag. After tagged successfully, set open hole cement plug # 2 from ~~6100'~~^{6315'} to ~~5600'~~^{6100'} as the BLM requires. WOC, tag. ~~Drill back down kick-off point.~~ An open-hole whipstock will be set at an anticipated 5722' depending on log interpretation. Open hole and pilot hole plug design and setting depths were discussed with Mike Whittaker, NMOCD Hobbs, and Paul Swartz BLM CFO. Plug composition in cementing section.

TOH and make up 8 3/4" directional BHA to build curve. TIH, drill curve and land curve at 6200' TVD, 6472' TMD, adjusting in accordance to the logs. TOOH and pick up 7 7/8" bit with lateral assembly. Drill the 7 7/8" hole to TD at 10,616' TMD. After drilling hole to TD, will install the 5 1/2" casing from TD to 6402', then run 7" from 6400' (with a crossover sub covering 6400'-6402') to surface. Circulate cement to surface according to Baker Hughes' recommendations. There are no plans to anticipate an alternative casing string at this time.

4.1 Cementing Program:

a. 13 3/8" Surface Casing:

The 13 3/8" surface casing shall be set at 450', and sufficient amount of cement will be circulated back to the surface (TOC at 0'). The lead mixture consist of Class C cement + 2% bwoc Calcium Chloride + 0.25lbs/sk Cello Flake + 0.0005 gps FP-6L+ 4% bwoc Bentonite + 81.3% fresh water. The anticipated quantity is 290 sacks, (506 cu ft.), Weight 13.50 ppg, Yield 1.75 cf/sk., with 102% excess.

The tail slurry will consist of Class C cement + 0.005% Static Free + 2% bwoc Calcium Chloride + 0.25lbs/sack Cello Flake + 0.005 gps FP-6L + 56.2 Fresh Water. The anticipated quantity is 120 sacks (162 cu ft), Weight 14.80 ppg, Yield 1.35 cf/sk., with 102% volume excess.

b. 9 5/8" Intermediate Casing String:

The 9 5/8" intermediate casing string shall be set at 3100' with sufficient amount of cement circulated back to surface (TOC at 0'). The lead slurry shall consist of (50:50) Poz (Fly Ash) Class C cement + 0.005% bwoc Static Free + 5% bwoc Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.2% bwoc FL-52 + 0.005 gps FP-6L + 6% bwoc Bentonite + 0.2% bwoc Sodium Metasilicate + 107.8% Fresh Water. The anticipated quantity is 550 sacks (1123 cu ft), Weight 12.5 ppg, Yield 2.05 cf/sk., with 51% volume excess.

The tail slurry will consist of Class C cement + 1% bwoc Calcium Chloride + 0.25 lbs/sk Cello Flake + 56.1% fresh water. The anticipated quantity is 225 sacks (310 cu ft), Weight 13.80 ppg, Yield 1.38 cf/sk., with 51% volume excess.

c. 7.0 " XO 5 1/2" Production Casing String:

The lead slurry will consist of 35:65 Poz Fly Ash Class C Cement + 0.005% bwoc Static Free + 3% bwoc Sodium Chloride + 0.125% bwoc Cello Flake + 3 lbs/sack LCM-1 + 0.45% bwoc FP-6L + 6% bwoc Bentonite + 102.5% fresh water. The anticipated quantity is 535 sacks (1073 cu ft), Weight 12.50 ppg, Yield 2.01 cf/sk., + 150 sx (30% excess), for a total sack quantity of 650 sx.

The tail slurry will consist of Class C Cement + 0.005% bwoc Static Free + 5% bwoc Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-52 + 0.005 gps FP-6L + 0.45% bwoc Sodium Metasilicate + 57.4% Fresh Water. The anticipated quantity is 995 sacks (1271 cu ft), Weight 14.20 ppg, Yield 1.28 cf/sk., + 250 sx (25% excess), for a total sack quantity of 1145 sx.

d. The Pilot Hole Plugs:

Plug # 1 shall consist of Class H cement, + .2% bwoc R-3, .005% bwoc Static Free, .005 gps FP6L, 46.3 % fresh water. The anticipated quantity is 172 sacks, + 50 sx (29% excess), a total 222 sx, a weight of 15.6 ppg, Yield 1.18 cu'/sx and will be set from 8800-8315 ft.

Plug # 2 shall consist of Class H cement, 1% bwoc CD 32, .005% bwoc Static Free, .005 gps FP6L and 26.3% fresh water. The anticipated quantity is 335 sacks, + 83 sx (25% excess), a total of 419 sx, a weight of 18.0 ppg, Yield 0.89 cu'/sx. The plug shall cover from 6100 to 5600 ft. as to BLM requirements.

5. Pressure Control:

A 13 $\frac{5}{8}$ " BOPE rated at 3,000 psi will be installed on the 13 $\frac{3}{8}$ " surface casing. Upon completing the cementing job and prior to drilling out of the surface casing, the 3M annular shall be tested to 1500psi and held for 30 minutes. The double ram preventors shall be tested to 3M and held for 30 minutes. The 13 $\frac{3}{8}$ " casing shall be tested to 1200 psi and held for 30 minutes. Test shall be performed by a third party and the BLM will be notified at least 48 hours prior to testing.

An 11" 5M BOP shall be installed on the 9 $\frac{5}{8}$ " intermediate casing. Upon completing the cementing job and prior to drilling out of the intermediate casing, the 5M annular shall be tested to 2500 psi and held for 30 minutes. The double ram preventors shall be tested to 5,000 psi and held for 30 minutes. The 5M BOPE will remain throughout the drilling of this well. The 9 $\frac{5}{8}$ " casing shall be tested to 1500 psi and held for 30 minutes. Test shall be performed by a third party and the BLM will be notified at least 48 hours prior to testing. All BOPE test shall be conducted in accordance with BLM Onshore Oil and Gas Order No. 02.

Additional BOP accessories include an upper and lower kelly cock with the locking handle readily available on the rig floor at all times, the choke operating controls and floor safety valves are on the rig floor and pit fluid level sensors are used to monitor pit levels. H2S sensors are installed by the third party H2S safety company and gas indicators are mounted at the return flow line by the mud logging unit.

6. Drilling Fluid Program:

0' - 450'	Fresh water	8.4 - 8.6 ppg	
450' - 3100'	Brine water	10.0 - 10.1 ppg	(For optimum hole stability)
3100' - 10,616'	Fresh water and brine	8.8 - 9.2 ppg	

7. Auxillary Equipment:

No additional accessories are anticipated other than the equipment listed under the pressure control section.

8. Logging Agenda:

The mud logging 2 man unit will begin monitoring at 450' to TD.

Electrical logs: CNL / LDT / CAL / GR from TD to intermediate casing,
DLL/ GR from 8800' to surface.

A DST is probable in the Bone Springs formation depending upon logging results.

9. Potential Hazards

No abnormal pressures or temperatures are anticipated. BHP is estimated to be 3872 psi with a pressure gradient of .44 at 8800 ft. The Bone Springs at 6400 ft is anticipated to have a BHP of 2816 psi, with a BHT of 175° F. An H2S contingency plan will be incorporated by a third party prior to drilling out of the intermediate 9 $\frac{5}{8}$ " shoe in accordance with Onshore Orders. This includes:

- 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 plan to start as soon as possible once the APD is approved. We have scheduled rigs by or before the 15th of January 2012. We anticipate 45 to 55 days to drill and approximately 18 to 24 days for completion.

11. Surface & Minerals Ownership:

The surface and mineral ownership is USA. The well's allocation will incorporate four qtr/qtrs for a 160 acre proration. It will cover the E/2E/2 of section 10. The lease is NMNM 125141 and covers 320 acres, ALIQ: E/2 of section 10, T. 20 S., R. 27 E. A Communitization Agreement will not be necessary for this well.

COMPANY PERSONNEL:

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

Gabe Herrera (Marshall & Winston – Engineer) (432) 684-6373 (o)
(432) 260-8650 (c)

Tom Brandt (Marshall & Winston – Operations) (432) 684-6373 (o)
(432) 553-9747 (c)

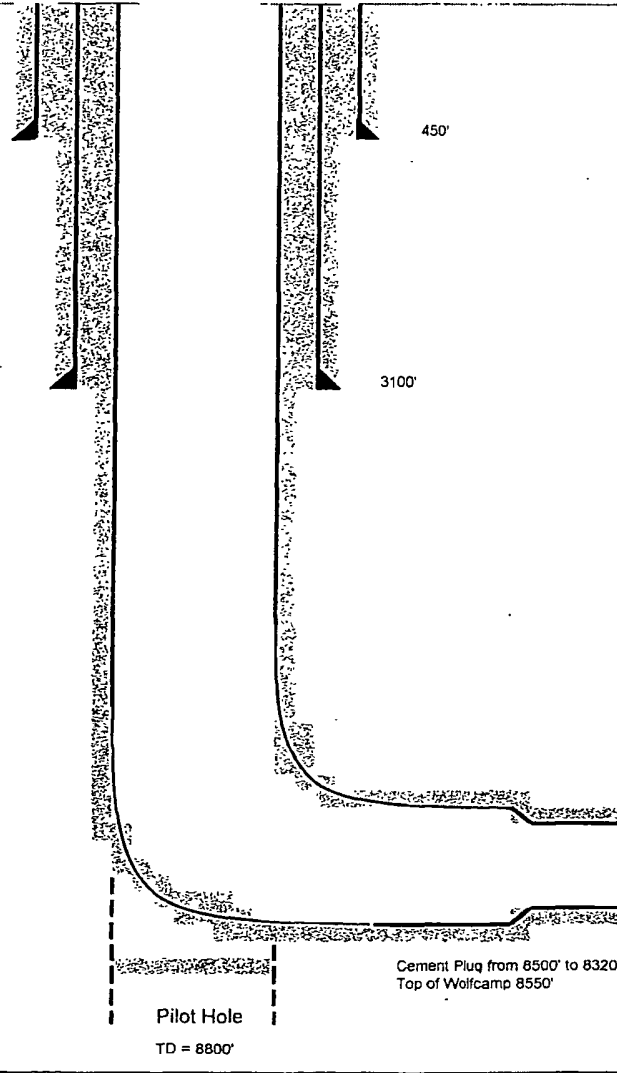
George Watters (Marshall & Winston – Geologist) (432) 684-6373 (o)
(432) 631-2051 (c)

Brent May (Marshall & Winston – Geologist) (432) 684-6373 (o)
(432) 254-3525 (c)

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

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

AFE No. API # Permit No. Project No.	 Angel Ranch Fed Com 11-1H Eddy County, NM Proposed Wellbore Sketch	AFE Information Dry Hole: Days: Proposed TD: 10,612' TMD 6,200' TVD v
---	---	---



Spod with 17-1/2" bit to 450'

Set 13-3/8" 48# H40 at 450' cmt to surface

Drill 12-1/4" Hole with 10-10 2

Cement to surface

9-5/8" 40# J-55 STC Casing at 3100'.

Drill with 8-3/4" to TD Pilot Hole

Set Open Hole Whipstock to kick off at about 5722'

Drill curve with 8-3/4" bit

7" 26# N-80 from 6400' to surface XO sub from 6400 - 6402'

Land Curve at 6200' TVD 6472' TMD.
 Drill out with 7-7/8" bit to TD

5-1/2" J-55 17.0# LTC Casing To 6402'

TMD 10,616'

Cement Plug from 8500' to 8320'
 Top of Wolfcamp 8550'

Pilot Hole
 TD = 8800'

Well Information
 Surface Location Eddy County, T20S R27E Section 11 330' FSL & 660' FWL

Marshall & Winston Inc.

Project: Eddy County, NM (Nad27)
 Site: Angel Ranch Federal Com 11
 Well: Angel Ranch Fed Com 11 1H
 Wellbore: Wellbore #1



Plan: Plan#1 092611 (Angel Ranch Fed Com 11 1H/Wellbore #1)



WELL DETAILS: Angel Ranch Fed Com 11 1H

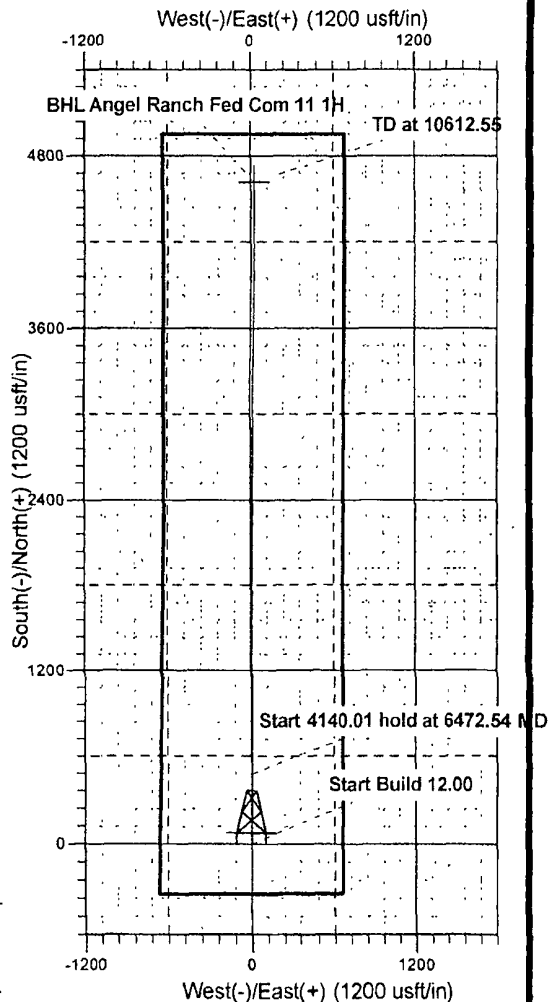
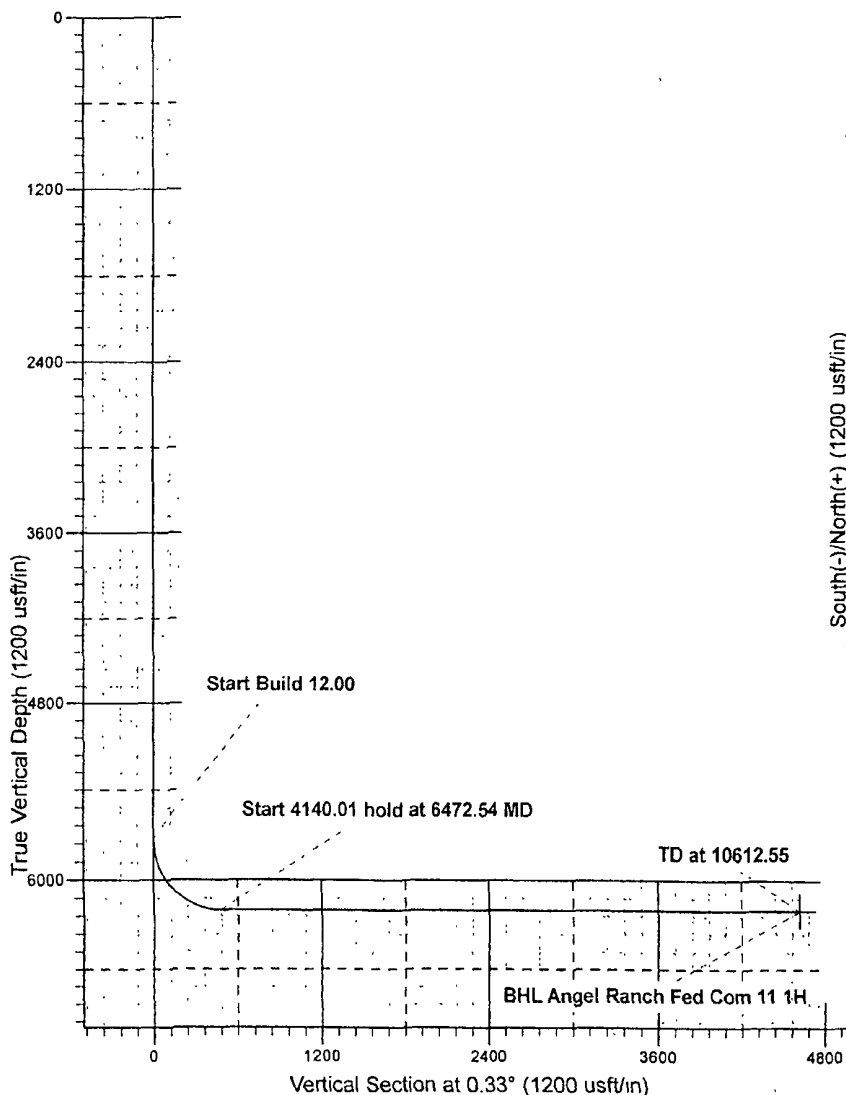
Ground Level: 3371.00
 Northing: 575286.20 Easting: 523349.30 Latitude: 32° 34' 53.562 N Longitude: 104° 15' 27.106 W

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape Point
BHL Angel Ranch Fed Com 11 1H	6200.00	4617.40	26.90	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5722.54	0.00	0.00	5722.54	0.00	0.00	0.00	0.00	0.00	
6472.54	90.00	0.33	6200.00	477.46	2.78	12.00	0.33	477.46	
10612.55	90.00	0.33	6200.00	4617.40	26.90	0.00	0.00	4617.48	BHL Angel Ranch Fed Com 11 1H





Phoenix Technology Services
Marshall & Winston Inc.



Company:	Marshall & Winston Inc	Local Co-ordinate Reference:	Well Angel Ranch Fed Com, 11.1H
Project:	Eddy County, NM (Nad27)	TVD Reference:	WELL @ 3390.00usft (Original Well Elev + 19' KB)
Site:	Angel Ranch Federal Com 11.	MD Reference:	WELL @ 3390.00usft (Original Well Elev + 19' KB)
Well:	Angel Ranch Fed Com 11.1H	North Reference:	Gnd.
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan#1 092611	Database:	GCR DB v5000

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (usft)	Northings (usft)	Eastings (usft)
0 00	0 00	0 00	-3,390 00	0 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
100 00	0 00	0 00	-3,290 00	100 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
200 00	0 00	0 00	-3,190 00	200 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
300 00	0 00	0 00	-3,090 00	300 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
400 00	0 00	0 00	-2,990 00	400 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
500 00	0 00	0 00	-2,890 00	500 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
600 00	0 00	0 00	-2,790 00	600 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
700 00	0 00	0 00	-2,690 00	700 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
800 00	0 00	0 00	-2,590 00	800 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
900 00	0 00	0 00	-2,490 00	900 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
1,000 00	0 00	0 00	-2,390 00	1,000 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
1,100 00	0 00	0 00	-2,290 00	1,100 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
1,200 00	0 00	0 00	-2,190 00	1,200 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
1,300 00	0 00	0 00	-2,090 00	1,300 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
1,400 00	0 00	0 00	-1,990 00	1,400 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
1,500 00	0 00	0 00	-1,890 00	1,500 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
1,600 00	0 00	0 00	-1,790 00	1,600 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
1,700 00	0 00	0 00	-1,690 00	1,700 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
1,800 00	0 00	0 00	-1,590 00	1,800 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
1,900 00	0 00	0 00	-1,490 00	1,900 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
2,000 00	0 00	0 00	-1,390 00	2,000 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
2,100 00	0 00	0 00	-1,290 00	2,100 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
2,200 00	0 00	0 00	-1,190 00	2,200 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
2,300 00	0 00	0 00	-1,090 00	2,300 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
2,400 00	0 00	0 00	-990 00	2,400 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
2,500 00	0 00	0 00	-890 00	2,500 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
2,600 00	0 00	0 00	-790 00	2,600 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30



Phoenix Technology Services
Marshall & Winston Inc



Company:	Marshall & Winston Inc.	Local Co-ordinate Reference:	Well Angel Ranch Fed Com 11 1H
Project:	Eddy County, NM (Nad27)	TVD Reference:	WELL @ 3390 00usft (Original Well Elev + 19' KB)
Site:	Angel Ranch Federal Com 11	MD Reference:	WELL @ 3390 00usft (Original Well Elev + 19' KB)
Well:	Angel Ranch Fed Com 11 1H	North Reference:	Gnd
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan#1 092611	Database:	GCR DB v5000

Planned Survey											
MD (usft)	Inc (")	Azi (azimuth)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	OLG (1100usft)	Northings (usft)	Eastings (usft)	
2,700.00	0.00	0.00	-690.00	2,700.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
2,800.00	0.00	0.00	-590.00	2,800.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
2,900.00	0.00	0.00	-490.00	2,900.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
3,000.00	0.00	0.00	-390.00	3,000.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
3,100.00	0.00	0.00	-290.00	3,100.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
3,200.00	0.00	0.00	-190.00	3,200.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
3,300.00	0.00	0.00	-90.00	3,300.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
3,400.00	0.00	0.00	10.00	3,400.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
3,500.00	0.00	0.00	110.00	3,500.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
3,600.00	0.00	0.00	210.00	3,600.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
3,700.00	0.00	0.00	310.00	3,700.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
3,800.00	0.00	0.00	410.00	3,800.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
3,900.00	0.00	0.00	510.00	3,900.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
4,000.00	0.00	0.00	610.00	4,000.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
4,100.00	0.00	0.00	710.00	4,100.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
4,200.00	0.00	0.00	810.00	4,200.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
4,300.00	0.00	0.00	910.00	4,300.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
4,400.00	0.00	0.00	1,010.00	4,400.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
4,500.00	0.00	0.00	1,110.00	4,500.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
4,600.00	0.00	0.00	1,210.00	4,600.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
4,700.00	0.00	0.00	1,310.00	4,700.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
4,800.00	0.00	0.00	1,410.00	4,800.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
4,900.00	0.00	0.00	1,510.00	4,900.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
5,000.00	0.00	0.00	1,610.00	5,000.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
5,100.00	0.00	0.00	1,710.00	5,100.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
5,200.00	0.00	0.00	1,810.00	5,200.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	
5,300.00	0.00	0.00	1,910.00	5,300.00	0.00	0.00	0.00	0.00	575,286.20	523,349.30	



Phoenix Technology Services
Marshall & Winston Inc



Company:	Marshall & Winston Inc	Local Co-ordinate Reference:	Well Angel Ranch Fed Com 11'1H
Project:	Eddy County, NM (Nad27)	TVD Reference:	WELL @ 3390 00usft (Original Well Elev + 19' KB)
Site:	Angel Ranch Federal Com 11	MD Reference:	WELL @ 3390 00usft (Original Well Elev + 19' KB)
Well:	Angel Ranch Fed Com 11 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan#1 092611	Database:	GCR DB v5000

MD (usft)	Inc (°)	Az (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (1/100usft)	Northing (usft)	Easting (usft)
5,400 00	0 00	0 00	2,010 00	5,400 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
5,500 00	0 00	0 00	2,110 00	5,500 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
5,600 00	0 00	0 00	2,210 00	5,600 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
5,700 00	0 00	0 00	2,310 00	5,700 00	0 00	0 00	0 00	0 00	575,286 20	523,349 30
5,722 54	0 00	0 00	2,332.54	5,722 54	0 00	0 00	0 00	0 00	575,286 20	523,349 30
Start Build 12.00										
5,800 00	9 30	0 33	2,409 66	5,799 66	6 27	0 04	6 27	12 00	575,292 47	523,349 34
5,900 00	21 30	0 33	2,505 94	5,895 94	32 60	0 19	32 60	12 00	575,318 80	523,349 49
6,000 00	33 30	0 33	2,594 64	5,984 64	78 38	0 46	78 38	12 00	575,364 58	523,349 76
6,100 00	45 30	0 33	2,671 89	6,061 89	141 59	0 82	141 59	12 00	575,427.79	523,350 12
6,200 00	57 30	0 33	2,734.31	6,124 31	219 49	1 28	219 49	12 00	575,505 69	523,350.58
6,300 00	69 30	0 33	2,779.16	6,169 16	308 65	1.80	308.66	12 00	575,594 85	523,351 10
6,400 00	81 30	0 33	2,804 50	6,194 50	405 20	2 36	405 21	12 00	575,691 40	523,351 66
6,472 54	90.00	0 33	2,810 00	6,200 00	477 46	2 78	477 46	12 00	575,763 66	523,352.08
Start 4140.01 hold at 6472.54 MD										
6,500 00	90 00	0 33	2,810 00	6,200 00	504 92	2 94	504 93	0 00	575,791 12	523,352 24
6,600 00	90 00	0 33	2,810 00	6,200 00	604 92	3 52	604 93	0 00	575,891 12	523,352 82
6,700 00	90 00	0 33	2,810 00	6,200 00	704 92	4.11	704 93	0 00	575,991 12	523,353.41
6,800 00	90 00	0 33	2,810 00	6,200 00	804 92	4 69	804 93	0 00	576,091 12	523,353 99
6,900 00	90 00	0 33	2,810 00	6,200 00	904 91	5 27	904 93	0 00	576,191.11	523,354 57
7,000 00	90 00	0 33	2,810 00	6,200 00	1,004 91	5 85	1,004 93	0 00	576,291 11	523,355.15
7,100 00	90 00	0 33	2,810 00	6,200 00	1,104 91	6 44	1,104 93	0 00	576,391 11	523,355 74
7,200 00	90 00	0 33	2,810 00	6,200 00	1,204 91	7 02	1,204 93	0 00	576,491 11	523,356 32
7,300 00	90 00	0 33	2,810 00	6,200 00	1,304 91	7 60	1,304 93	0 00	576,591 11	523,356 90
7,400 00	90 00	0 33	2,810.00	6,200 00	1,404 91	8.18	1,404 93	0 00	576,691 11	523,357 48
7,500 00	90 00	0 33	2,810.00	6,200 00	1,504 90	8 77	1,504 93	0 00	576,791.10	523,358 07
7,600 00	90 00	0 33	2,810.00	6,200 00	1,604 90	9.35	1,604 93	0 00	576,891 10	523,358 65



Phoenix Technology Services
Marshall & Winston Inc.



Company:	Marshall & Winston Inc	Local Co-ordinate Reference:	Well Angel Ranch Fed Com 11 1H
Project:	Eddy County, NM (Nad27)	TVD Reference:	WELL @ 3390 00usft (Original Well Elev + 19' KB)
Site:	Angel Ranch Federal Com 11	MD Reference:	WELL @ 3390 00usft (Original Well Elev + 19' KB)
Well:	Angel Ranch Fed Com 11 1H	North Reference:	Gnd.
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan#1 092611	Database:	GCR DB.v5000

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/E (usft)	E/W (usft)	V. Sec (usft)	D Lag (1/1000usft)	Northing (usft)	Easting (usft)
7,700.00	90.00	0.33	2,810.00	6,200.00	1,704.90	9.93	1,704.93	0.00	578,991.10	523,359.23
7,800.00	90.00	0.33	2,810.00	6,200.00	1,804.90	10.51	1,804.93	0.00	577,091.10	523,359.81
7,900.00	90.00	0.33	2,810.00	6,200.00	1,904.90	11.10	1,904.93	0.00	577,191.10	523,360.40
8,000.00	90.00	0.33	2,810.00	6,200.00	2,004.90	11.68	2,004.93	0.00	577,291.10	523,360.98
8,100.00	90.00	0.33	2,810.00	6,200.00	2,104.89	12.26	2,104.93	0.00	577,391.09	523,361.56
8,200.00	90.00	0.33	2,810.00	6,200.00	2,204.89	12.85	2,204.93	0.00	577,491.09	523,362.15
8,300.00	90.00	0.33	2,810.00	6,200.00	2,304.89	13.43	2,304.93	0.00	577,591.09	523,362.73
8,400.00	90.00	0.33	2,810.00	6,200.00	2,404.89	14.01	2,404.93	0.00	577,691.09	523,363.31
8,500.00	90.00	0.33	2,810.00	6,200.00	2,504.89	14.59	2,504.93	0.00	577,791.09	523,363.89
8,600.00	90.00	0.33	2,810.00	6,200.00	2,604.89	15.18	2,604.93	0.00	577,891.09	523,364.48
8,700.00	90.00	0.33	2,810.00	6,200.00	2,704.88	15.76	2,704.93	0.00	577,991.08	523,365.06
8,800.00	90.00	0.33	2,810.00	6,200.00	2,804.88	16.34	2,804.93	0.00	578,091.08	523,365.64
8,900.00	90.00	0.33	2,810.00	6,200.00	2,904.88	16.92	2,904.93	0.00	578,191.08	523,366.22
9,000.00	90.00	0.33	2,810.00	6,200.00	3,004.88	17.51	3,004.93	0.00	578,291.08	523,366.81
9,100.00	90.00	0.33	2,810.00	6,200.00	3,104.88	18.09	3,104.93	0.00	578,391.08	523,367.39
9,200.00	90.00	0.33	2,810.00	6,200.00	3,204.88	18.67	3,204.93	0.00	578,491.08	523,367.97
9,300.00	90.00	0.33	2,810.00	6,200.00	3,304.87	19.25	3,304.93	0.00	578,591.07	523,368.55
9,400.00	90.00	0.33	2,810.00	6,200.00	3,404.87	19.84	3,404.93	0.00	578,691.07	523,369.14
9,500.00	90.00	0.33	2,810.00	6,200.00	3,504.87	20.42	3,504.93	0.00	578,791.07	523,369.72
9,600.00	90.00	0.33	2,810.00	6,200.00	3,604.87	21.00	3,604.93	0.00	578,891.07	523,370.30
9,700.00	90.00	0.33	2,810.00	6,200.00	3,704.87	21.58	3,704.93	0.00	578,991.07	523,370.88
9,800.00	90.00	0.33	2,810.00	6,200.00	3,804.87	22.17	3,804.93	0.00	579,091.07	523,371.47
9,900.00	90.00	0.33	2,810.00	6,200.00	3,904.86	22.75	3,904.93	0.00	579,191.06	523,372.05
10,000.00	90.00	0.33	2,810.00	6,200.00	4,004.86	23.33	4,004.93	0.00	579,291.06	523,372.63
10,100.00	90.00	0.33	2,810.00	6,200.00	4,104.86	23.91	4,104.93	0.00	579,391.06	523,373.21
10,200.00	90.00	0.33	2,810.00	6,200.00	4,204.86	24.50	4,204.93	0.00	579,491.06	523,373.80
10,300.00	90.00	0.33	2,810.00	6,200.00	4,304.86	25.08	4,304.93	0.00	579,591.06	523,374.38



Phoenix Technology Services
Marshall & Winston Inc



Company:	Marshall & Winston Inc	Local Co-ordinate Reference:	Well Angel Ranch Fed Com 11 1H
Project:	Eddy County, NM (Nad27)	TVD Reference:	WELL @ 3390.00usft (Original Well Elev + 19' KB)
Site:	Angel Ranch Federal Com 11	MD Reference:	WELL @ 3390.00usft (Original Well Elev + 19' KB)
Well:	Angel Ranch Fed Com 11 1H	North Reference:	Gnd
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan# 092611	Database:	GCR DB v5000

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	D.Lag (ft/100usft)	Northing (usft)	Easting (usft)	
10,400.00	90.00	0.33	2,810.00	6,200.00	4,404.85	25.66	4,404.93	0.00	579,691.05	523,374.96	
10,500.00	90.00	0.33	2,810.00	6,200.00	4,504.85	26.24	4,504.93	0.00	579,791.05	523,375.54	
10,600.00	90.00	0.33	2,810.00	6,200.00	4,604.85	26.83	4,604.93	0.00	579,891.05	523,376.13	
10,612.55	90.00	0.33	2,810.00	6,200.00	4,617.40	26.90	4,617.48	0.00	579,903.60	523,376.20	
TD at 10612.55											

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		N/S (usft)	E/W (usft)		
5,722 54	5,722 54	0 00	0 00	Start Build 12 00	
6,472 54	6,200 00	477 46	2 78	Start 4140 01 hold at 6472 54 MD	
10,612 55	6,200 00	4,617 40	26 90	TD at 10612 55	

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------

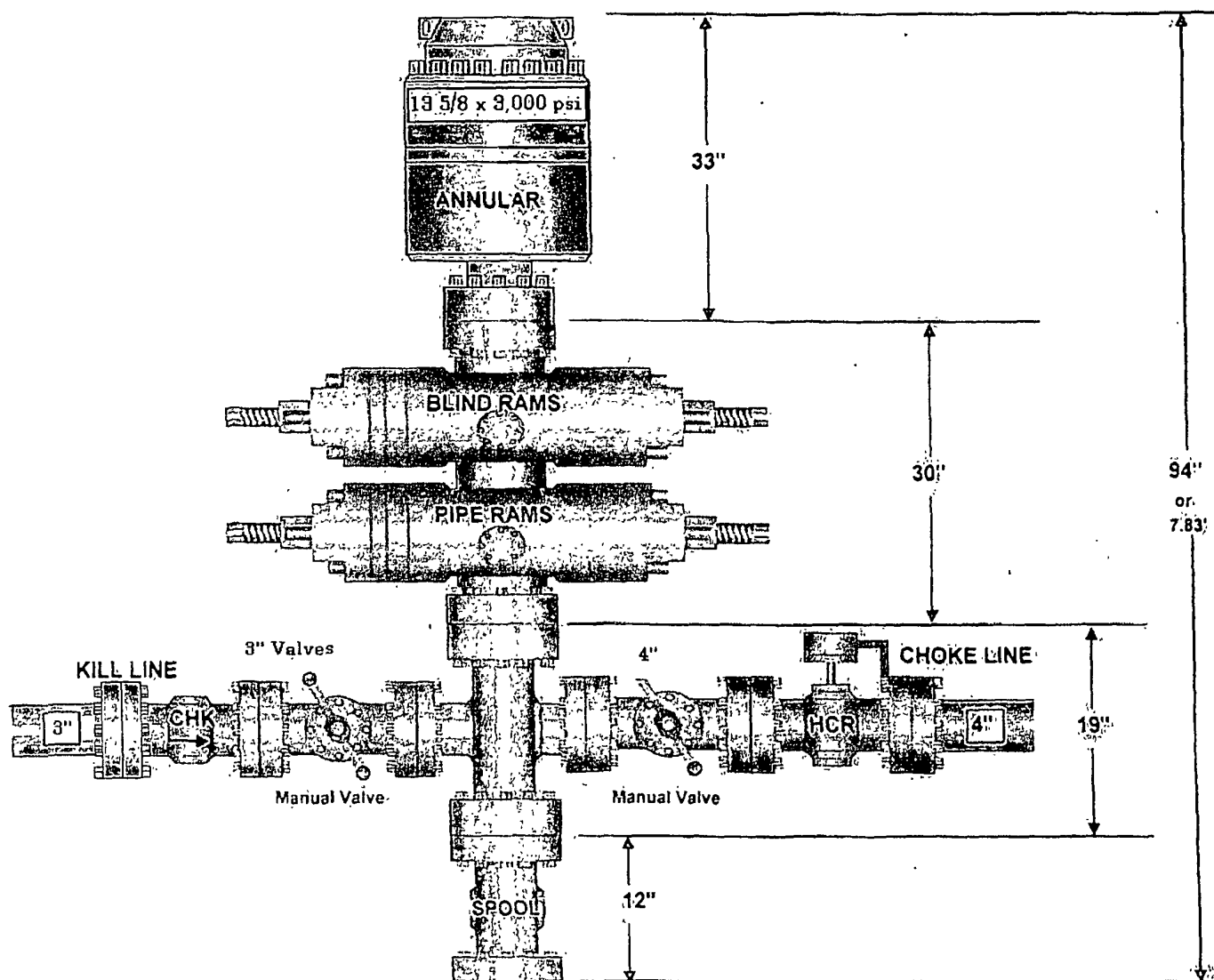


Exhibit 2
 13 5/8" x 3M BOPE
 stacking configuration

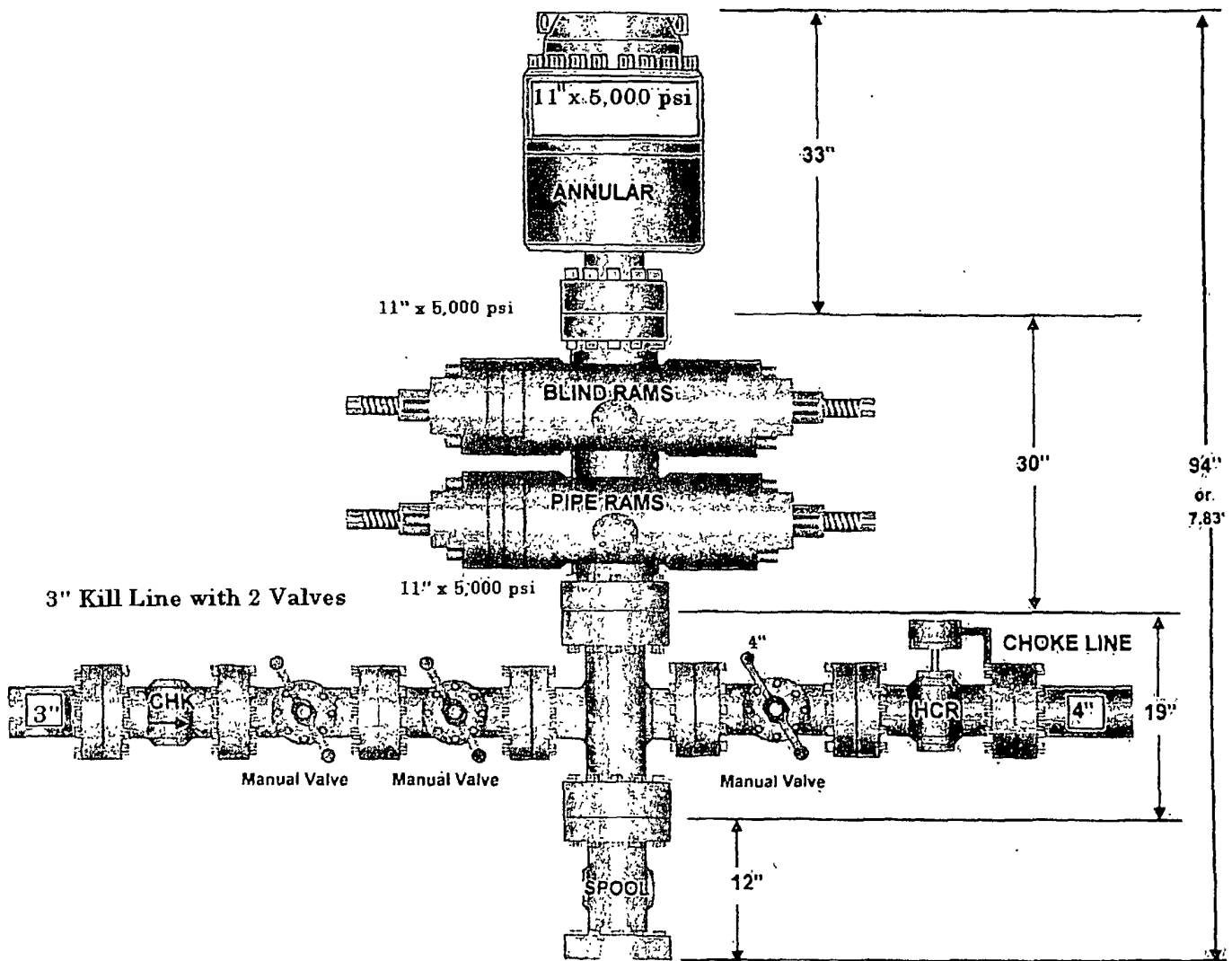


Exhibit 2.2
11" x 5M BOPE
stacking configuration