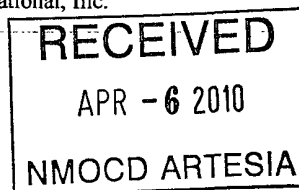




An Operating Unit of Smith International, Inc.

30.015.37365



DIRECTIONAL SURVEY REPORT

YATES PETROLEUM

***PETROGULF BJT FEDERAL #1H
PILOT HOLE***

EDDY COUNTY, NEW MEXICO

PREPARED BY: FRANCISCO SINISTERRA

MR

Pathfinder Energy Services, Inc.
6213 W. Interstate 20 • Midland, TX • 79706
(432) 681-6000

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) JAY FULTON
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 11/06/09 TO 11/09/09
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

YATES PETROLEUM
PETROGULF BJT FEDERAL #1H PILOT HOLE
EDDY COUNTY, NM
RIG: SILVER OAK #10

9. SURVEY CERTIFIED FROM: 952 TO 4374 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 15.28 FEET ON A BEARING OF 52.48 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 4428 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



FRANCISCO SINISTERRA
MWD COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01

Tie-in Date: 11/06/2009

Date Completed: 11/09/2009

YATES PETROLEUM
PETROGULF BJT FEDERAL #1H - PILOT HOLE
EDDY COUNTY, NEW MEXICO
Rig:SILVER OAK 10
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:JAY FULTON

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.12.42.9597 N LON:103.44.28.0717 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 724491.0520 Y: 441339.9320
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.53° EAST TO GRID
Vertical Section Plane: 0.00
Survey Vert. Reference: 17.50' Rotary Table To Ground
Altitude:3591.00' Ground To MSL

Measured Depth	4428.00	(feet)
Inclination	1.58	(deg)
Azimuth	139.38	(deg)
True Vertical Depth	4427.44	(feet)
Vertical Section	9.31	(feet)
Survey X cord	724503.15	(feet)
Survey Y cord	441349.19	(feet)
Survey Lat	32.21195852 N	(deg)
Survey Lon	103.74109175 W	(deg)
Rectangular Corr. N/S	9.31 N	(feet)
Rectangular Corr. E/W	12.12 E	(feet)
Closure Distance	15.28	(feet)
Direction of Closure	52.48	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
 PETROGULF BJT FEDERAL #1H - PILOT HOLE
 EDDY COUNTY, NEW MEXICO
 Rig:SILVER OAK 10
 PathFinder Office Supervisor: FRANCISCO SINISTERRA
 PathFinder Field Engineers: JAY FULTON

Page 01/02
 Tie-in Date: 11/06/2009
 Date Completed: 11/09/2009

Survey Horiz. Reference:WELLHEAD
 Ref Coordinates: LAT:32.12.42.9597 N LON:103.44.28.0717 W
 Reference:NAD83 new mexico east Transverse Mercator
 Ref GRID Coord: X: 724491.0520 Y: 441339.9320
 North Aligned To:GRID NORTH
 Total Magnetic Correction: 7.53° EAST TO GRID
 Vertical Section Plane: 0.00
 Survey Vert. Reference: 17.50' Rotary Table To Ground
 Altitude:3591.00' Ground To MSL

Survey Calculations by RX4 using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
TIE-IN ASSUMING VERTICAL DEPTH @ 850' MD.										
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00@	0.00	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
952.00	0.62	35.61	952.00	102.00	0.45	0.45 N	0.32 E	0.55@	35.61	0.61
1074.00	0.62	35.39	1073.99	122.00	1.52	1.52 N	1.09 E	1.87@	35.53	0.00
1201.00	0.79	40.56	1200.98	127.00	2.75	2.75 N	2.06 E	3.43@	36.78	0.14
1328.00	0.97	37.25	1327.97	127.00	4.27	4.27 N	3.28 E	5.38@	37.49	0.15
1456.00	1.58	27.92	1455.93	128.00	6.69	6.69 N	4.76 E	8.21@	35.41	0.50
1583.00	0.88	4.08	1582.90	127.00	9.21	9.21 N	5.65 E	10.80@	31.51	0.67
1710.00	1.23	2.29	1709.88	127.00	11.55	11.55 N	5.77 E	12.91@	26.55	0.28
1837.00	1.14	287.50	1836.86	127.00	13.29	13.29 N	4.62 E	14.07@	19.17	1.14
1964.00	1.49	291.87	1963.83	127.00	14.28	14.28 N	1.88 E	14.41@	7.51	0.29
2091.00	0.18	101.04	2090.82	127.00	14.86	14.86 N	0.55 E	14.87@	2.10	1.31
2217.00	0.44	102.49	2216.81	126.00	14.72	14.72 N	1.21 E	14.77@	4.71	0.21
2344.00	0.70	81.42	2343.81	127.00	14.73	14.73 N	2.46 E	14.93@	9.47	0.26
2471.00	0.88	89.19	2470.80	127.00	14.86	14.86 N	4.20 E	15.44@	15.78	0.16
2598.00	1.06	90.92	2597.78	127.00	14.85	14.85 N	6.35 E	16.15@	23.14	0.14
2725.00	1.41	165.49	2724.75	127.00	13.32	13.32 N	7.91 E	15.49@	30.72	1.20
2851.00	1.41	218.52	2850.72	126.00	10.61	10.61 N	7.34 E	12.90@	34.67	1.00
2979.00	0.70	238.69	2978.70	128.00	8.97	8.97 N	5.69 E	10.62@	32.38	0.62
3105.00	0.62	251.20	3104.69	126.00	8.35	8.35 N	4.39 E	9.43@	27.71	0.13
3232.00	0.88	274.43	3231.68	127.00	8.20	8.20 N	2.76 E	8.65@	18.61	0.31
3359.00	0.79	333.82	3358.67	127.00	9.06	9.06 N	1.40 E	9.17@	8.80	0.65
3486.00	0.88	338.53	3485.66	127.00	10.76	10.76 N	0.66 E	10.78@	3.51	0.09
3613.00	1.14	349.20	3612.64	127.00	12.91	12.91 N	0.07 E	12.91@	0.30	0.25
3740.00	1.14	33.64	3739.61	127.00	15.20	15.20 N	0.53 E	15.21@	2.00	0.68

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
 PETROGULF BJT FEDERAL #1H - PILOT HOLE -
 EDDY COUNTY, NEW MEXICO
 RIG:SILVER OAK 10

Page 02/02

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets		Closure Dist Dir		DLS
						(ft)	(ft)	(ft)	(deg)	(dg/100ft)
3867.00	1.06	105.31	3866.60	127.00	15.94	15.94 N	2.36 E	16.11@	8.43	1.01
3994.00	0.26	127.67	3993.59	127.00	15.45	15.45 N	3.72 E	15.90@	13.55	0.65
4120.00	1.23	103.40	4119.57	126.00	14.97	14.97 N	5.27 E	15.86@	19.39	0.79
4248.00	2.02	130.25	4247.52	128.00	13.19	13.19 N	8.32 E	15.60@	32.26	0.84
4374.00	1.58	139.38	4373.46	126.00	10.44	10.44 N	11.15 E	15.27@	46.89	0.42
STRAIGHT LINE PROJECTION TO BIT @ 4428' MD.										
4428.00	1.58	139.38	4427.44	54.00	9.31	9.31 N	12.12 E	15.28@	52.48	0.00

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM CORPORATION		
LEASE / WELL No.:	PETROGULF BLT FED	#1H	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	NEW MEXICO	U.S.A.
RIG:	SILVEROAK #10		
API WELL No:	30-015-37365		
JOB No:	101009206 WT-WT		
P.O. / AFE No.	92660		
DIRECTIONAL COMPANY:	PATHFINDER ENERGY SERVICES		

WELL SITE INFORMATION

MAGNETIC DECLINATION:			
On Wall Plat:	LWD Calculated:	7.5288	Agreed Upon: 7.53
X = 724491.052000	Feet	Y = 441339.932000	Feet
SITE LATITUDE: 32.211933 N	SITE LONGITUDE: 103.741131 W		
GRID SYSTEM: TRUE <input type="checkbox"/> UTM <input checked="" type="checkbox"/> LAMBERT <input type="checkbox"/>	ZONE: New Mexico East		
PROPOSED DRIFT DIRECTION:		0	
KELLY BUSHING ELEVATION:		18 Feet	
ALTITUDE: 3591	Feet	WATER DEPTH:	Feet

TIE-IN SURVEY

MEASURED DEPTH:	850		
DRIFT ANGLE:	0		
DRIFT DIRECTION:	0		
TRUE VERTICAL DEPTH:	850		
VERTICAL SECTION:	0		
RECTANGULAR COORDINATE (N / S):	0		
RECTANGULAR COORDINATE (E / W):	0		
CLOSURE DISTANCE / DIRECTION:	0	0	
SURVEY CALCULATION METHOD:	AA <input type="checkbox"/>	MC <input checked="" type="checkbox"/>	RC <input type="checkbox"/> BT <input type="checkbox"/>
SOURCE OF TIE-IN DATA (COMPANY):			
COPY OF TIE-IN SURVEY REPORT	<input type="checkbox"/> YES <input type="checkbox"/> NO		

WELL PLAN

KICKOFF DEPTH:	0	TOTAL DEPTH:	4400
KICKOFF ANGLE:	0	MAX ANGLE:	0

PES Engineers: JAY FULTON *Jay Fulton*

**Signature of both field engineers required if applicable

Directional Driller: RICHARD HILL *Richard Hill*

DATE: 11-05-09
Nov. 5, 2009

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM
PETROGULF BJT FED #1H
EDDY COUNTY, NEWMEXICO
Rig:SILVER OAK 10

Tue Nov 03 17:56:52 2009

Coordinates

Latitude: 32.211933 N (32 deg. 12 min. 42.9597 sec.)
Longitude: 103.741131 W (-103 deg. 44 min. 28.0717 sec.)
Elevation: 3613.00 feet.
Calculation Date: Nov/03/2009

Magnetic Calculations

Model: IGRF2005
Dip Angle: 60.2035 degrees
Total Magnetic Field: 0.48780 gauss
Magnetic Declination: 7.844482 degrees
Horizontal Intensity: 0.242400 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.844482 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 724491.0520 feet
Y: 441339.9320 feet
True to Grid: (convergence) -0.315683 degrees
Magnetic to Grid: 7.528799 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.528799 Degr.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

Field
Copy

YATES PETROLEUM CORPORATION
PETROGULF BJT FED #1H
EDDY COUNTY
Rig: SILVEROAK 10

Fri Nov 06 07:01:04 2009

Coordinates

Latitude: 32.211933 N (32 deg. 12 min. 42.9597 sec.)
Longitude: 103.741131 W (-103 deg. 44 min. 28.0717 sec.)
Elevation: 3609.00 feet.
Calculation Date: Nov/06/2009

Magnetic Calculations

Model: IGRF2005
Dip Angle: 60.2034 degrees
Total Magnetic Field: 0.48780 gauss
Magnetic Declination: 7.843508 degrees
Horizontal Intensity: 0.242398 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.843508 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 724491.0520 feet
Y: 441339.9320 feet
True to Grid: (convergence) -0.315683 degrees
Magnetic to Grid: 7.527825 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.527825 Degr.

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name
Property Code	Property Name PETROGULF "BJT" FEDERAL		Well Number 1H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.		Elevation 3591

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	14	24 S	31 E		660	SOUTH	330	EAST	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
M	14	24 S	31 E		660	SOUTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
-----------------	-----------------	--------------------	-----------

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

<p>BOTTOM HOLE LOCATION Lat - N32°12'42.93" Long - W103°45'21.90" SPC- N.: 441311.868 E.: 719867.011 (NAD-83)</p> <p>N. 443290.529 E. 719524.371</p>		<p>SURFACE LOCATION Lat - N32°12'42.96" Long - W103°44'28.07" SPC- N.: 441339.932 E.: 724491.052 (NAD-83)</p> <p>N. 443323.160 E. 724810.372</p>		<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained 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 pursuant to a contract with an owner of such a 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>N. 441970.291 E. 719532.847</p>		<p>N. 442002.634 E. 724817.397</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>AUGUST 18, 2009</p> <p>Date Surveyed _____</p> <p>Signature & Seal of Professional Surveyor _____</p>
<p>PROJECT AREA</p> <p>PRODUCING ZONE</p> <p>PENETRATION POINT N. 441337.037 E. 724014.061</p> <p>330'</p> <p>4625.1'</p> <p>3592.5'</p> <p>330'</p> <p>3586.0'</p> <p>3586.6'</p> <p>N. 440650.053 E. 719541.328</p> <p>N. 440665.858 E. 722183.796</p> <p>N. 440682.109 E. 724824.427</p>				<p>W.O. No. 21634</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

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

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

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-37365	Pool Code 1	Pool Name Undesignated Bone Springs
Property Code 37894	Property Name PETROGULF "BJT" FEDERAL	Well Number 1H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3591

Surface Location

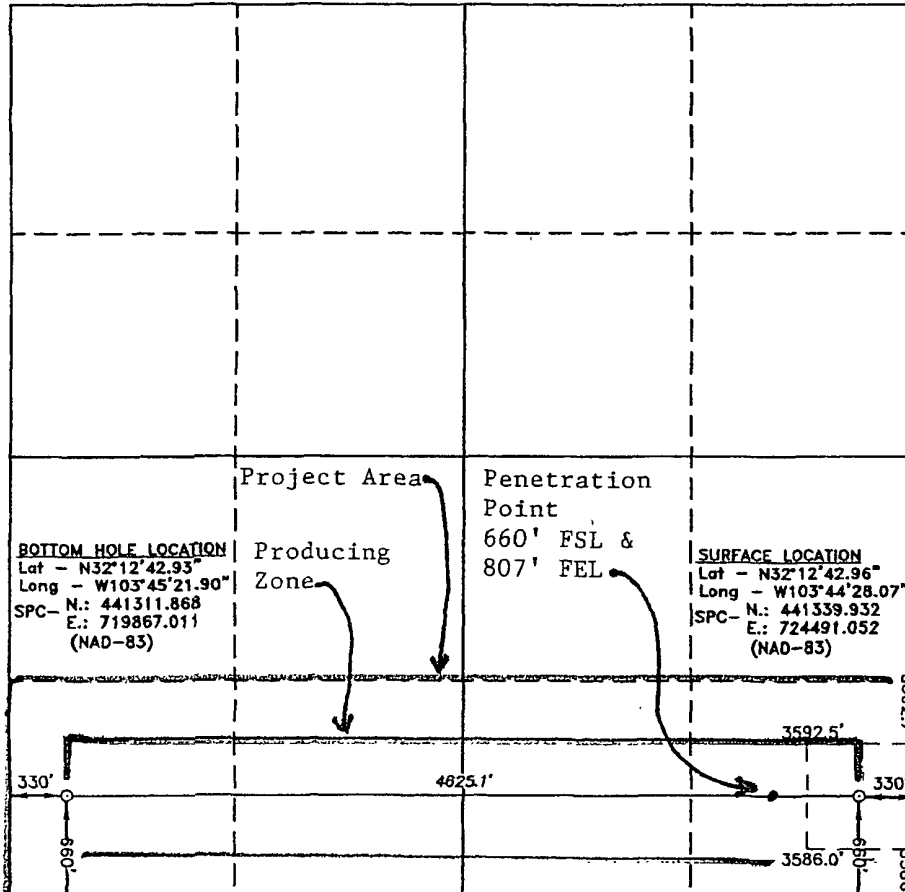
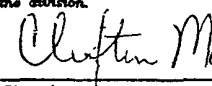
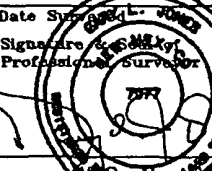
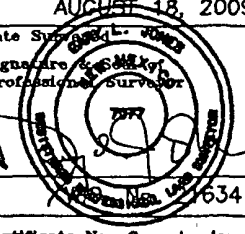
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	14	24 S	31 E		660	SOUTH	330	EAST	EDDY

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
M	14	24 S	31 E		660	SOUTH	330	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 contained 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 pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.  Signature Date 8/20/09 Clifton May for Cy Cowan Printed Name	
		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 18, 2009 Date  Signature Professional Surveyor  Certificate No. Gary L. Jones 7977 7977 BASIN SURVEYS	

RECEIVED
OCT 20 2009
NMOCD ARTESIA

OCD-ARTESIA

SECRETARY'S POTASH

ATS-09-576

KM

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

0952

1a. Type of Work: ☒ DRILL ☐ REENTER

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

2. Name of Operator

Yates Petroleum Corporation 025575

3a. Address

105 South Fourth Street, Artesia, NM 88210

3b. Phone No (include area code)

505-748-1471

4. Location of well (Report location clearly and in accordance with any State requirements *)
At surface

660' FSL & 330' FEL, UL P, SESE, Surface

At proposed prod. zone

660' FSL & 330' FWL, UL M, SWSW, Bottom

14. Elevations (Show whether DF, KDB, RT, GL, etc.)

This well is approximately 29 miles east of Carlsbad, NM

5. Lease Serial No.

NM-116044

6. If Indian, Allottee or Tribe Name

N/A

7. If Unit or CA Agreement, Name and No.

N/A

8. Lease Name and Well No.

Petrogulf "BJT" Federal #1H

9. API Well No.

30-015-37365

10. Field and Pool, or Exploratory

Undesignated Bone Springs

11. Sec., T, R, M., or Blk And Survey or Area

Section 14-T24S-R31E

12. County or Parish

Eddy

13. State

NM

15. Distance from proposed*
location to nearest
property or lease line, ft

(Also to nearest drlg. unit line, if any) 330'

16. No. of acres in lease

320.00

17. Spacing Unit dedicated to this well

S2S2

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft

None

19. Proposed Depth

8390' VD & 12805' MD

20. BLM/ BIA Bond No. on file

NATIONWIDE BOND #NMB000434

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

3591' GL

22. Approximate date work will start*

ASAP

23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1 shall 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 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

Clifton May

Name (Printed/ Typed)

for Cy Cowan

Date

8/20/2009

Title

Land Regulatory Agent

Approved By (Signature)

Linda S.C. Rundell

Name (Printed/ Typed)

Date

OCT 15 2009

Title

STATE DIRECTOR

Office

NM STATE 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 cc 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 wilfully 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)

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached