

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

5a. Type of work: ☒ DRILL ☐ REENTER		7 If Unit or CA Agreement, Name and No. NM 70798X	
5b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		8. Lease Name and Well No. Burton Flat Deep Unit #60H	
2. Name of Operator Devon Energy Production Company, L.P.		9. API Well No. 30-015-40695	
3a. Address 333 W. Sheridan Ave. Oklahoma City, OK 73102	3b. Phone No. (include area code) 405-228-4248	10 Field and Pool, or Exploratory Burton Flat, Bone Spring; EAST	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 2050' FSL & 1319' FWL, Unit L, Sec 27, 20S-28E At proposed prod. zone 330' FSL & 1980' FWL, Unit N, Sec 34, 20S-28E		11 Sec., T. R. M. or Blk. and Survey or Area Sec 27, T20S-R28E	
14 Distance in miles and direction from nearest town or post office* Approximately 5 miles north of Carlsbad, NM		12 County or Parish Eddy	13. State NM
15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16 No. of acres in lease 600 acres	17. Spacing Unit dedicated to this well E/2 SW4 of Sec 27-20S-28E & E/2 W/2 of Sec 34-20S-28E or 240 acres	
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See attached map	19 Proposed Depth TVD: 6,538' MD: 13,494' 6622' max	20 BLM/BIA Bond No. on file CO-1104 & NMB 000801	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3221.7' GL	22 Approximate date work will start*	23. Estimated duration 45 days	
Proposed PP: 1640' FSL & 1600' FWL		24. Attachments To be pad drilled with BFDU #59H	

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 <i>Patti Riechers</i>	Name (Printed/Typed) Patti Riechers	Date 08/09/2012
Title Sr. Staff Operations Technician		
Approved by (Signature) <i>/s/ Don Peterson</i>	Name (Printed/Typed) <i>/s/ Don Peterson</i>	Date SEP 11 2012
Title <i>Field</i> FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

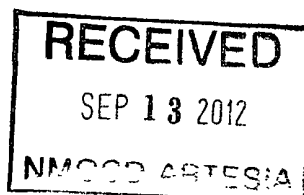
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.**APPROVAL FOR TWO YEARS**

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)

Capitan Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

Operators Representative:

The Devon Energy Production Company, L.P. representatives responsible for ensuring compliance of the surface use plan are listed below.

James Allbee - Operations Engineer Advisor
Devon Energy Production Company, L.P.
333 W. Sheridan
Oklahoma City, OK 73102-5010
(405) 228-4464 (office)
(405) 694-7718 (Cellular)

Don Mayberry - Superintendent
Devon Energy Production Company, L.P.
Post Office Box 250
Artesia, NM 88211-0250
(575) 748-3371 (office)
(575) 746-4945 (home)

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Devon Energy Production Company, L.P. am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

I hereby also certify that I, or Devon Energy Production Company, L.P. have made a good faith effort to provide the surface owner with a copy of the Surface Use Plan of Operations and any Conditions of Approval that are attached to the APD.

Executed this 9th day of August, 2012.

Printed Name: Patti Riechers

Signed Name: 

Position Title: Operations Technician

Address: 20 North Broadway, OKC OK 73102

Telephone: (405)-228-8699

Field Representative (if not above signatory):

Address (if different from above):

Telephone (if different from above):

DRILLING PROGRAM
Devon Energy Production Company, LP
Burton Flat Deep Unit 60H

Surface Location: 2050' FSL & 1319' FWL, Unit L, Sec 27 T20S R28E, Eddy, NM
Bottom Hole Location: 330' FSL & 1980' FWL, Unit N, Sec 34 T20S R28E, Eddy, NM

1. Geologic Name of Surface Formation

a. Quaternary

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

a. Fresh Water	50'	
b. Rustler	surface	
c. Salado	377'	Barren
d. Base of Salt	525'	Barren
e. Tansil	615'	Barren
f. Yates	765'	Barren
g. Seven Rivers	910'	Barren
h. Capitan	1,060'	Water
i. Capitan Base	2,750'	Barren
j. Delaware	2,995'	Oil
k. Bone Spring Lm	5,259'	Oil
l. 1 st Bone Spring Ss	6,462'	Oil

Total Depth 6,538'

3. Casing Program: (All casing is new and API approved.)

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weigh t</u>	<u>Collar</u>	<u>Grade</u>
26"	0' - 250'	20"	0' - 250' <i>see coll</i>	94#	BT&C	J/K-55
17 1/2"	250' - 850'	13 3/8"	0' - 850'	68#	BT&C	J/K-55
12 1/4"	850' - 2700'	9 5/8"	(0' - 2700' <i>see coll</i>)	40#	LT&C	J-55
8 3/4"	2700' - 5800'	5 1/2"	0' - 5800'	17#	LT&C	HCP110
8 3/4"	5800' - 13,494'	5 1/2"	5800' - 13,494'	17#	LT&C	HCP110

Design Parameter Factors:

<u>Casing Size</u>	<u>Collapse Design</u>	<u>Burst Design</u>	<u>Tension Design</u>
	<u>Factor</u>	<u>Factor</u>	<u>Factor</u>
20"	4.44	18.03	5.97
13 3/8"	1.74	3.91	9.58
9 5/8"	2.03	3.13	4.81
5 1/2"	2.75	3.92	1.94
5 1/2"	2.41	3.43	4.34

4. Cement Program: (volumes based on at least 25% excess):

- a. 20" Surface **Lead** w/ 510 Cl C cmt + 2% bwoc Calcium Chloride + 0.125#/sx CF + 56.3% FW, 14.8 ppg. **Yield** 1.35 cf/sx. **TOC @** surface.
- b. 13 3/8" 1st Intermediate **Lead** w/ 415 sx Class C + 2% bwow Calcium Chloride + 0.125#/sx CF + 4% bwoc Bentonite + 81.4% FW, 13.5 ppg. **Yield** 1.75 cf/sx. **Tail** w/ 335 sx Class C + 2% bwow Calcium Chloride + 0.125#/sx CF + 56.3% FW, 14.8 ppg. **Yield** 1.35 cf/sx. **TOC @** surface.
- c. 9 5/8" 2nd Intermediate **Lead** w/ 700 sacks (60:40) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack CF + 3 lbs/sack LCM-1 + 1% bwoc Sodium Metasilicate + 89.7% FW, 12.6 ppg. **Yield** 1.73 cf/sx. **Tail** w/ 300 sx (60:40) Poz (Fly Ash):Cl C Cmt + 5% bwow Sodium Chloride + 0.125 lbs/sack CF + 0.4% bwoc Sodium Metasilicate + 4% bwoc (MPA-5, to enhance compressive, tensile, flexural strength development and reduce permeability) + 65.5% FW, 13.8 ppg. **Yield** 1.38 cf/sx. **TOC @** surface.
- d. 5 1/2" Production **1st Lead** w/ 615 sx 50:50 POZ (Fly Ash) Class H + 0.5% bwoc FL-52 + 0.15% bwoc (ASA-301, to reduce free water and settling in cmt slurries) + 10% bwoc Bentonite + 0.3% bwoc (R-21, temperature retarder) + 130.5% FW, 11.8 ppg. **Yield** 2.30 cf/sx. **2nd lead** w/415 sacks (35:65) Poz (Fly Ash):Cl H Cement + 3% bwow Sodium Chloride + 0.125 lbs/sack CF + 0.7% bwoc FL-52 + 6% bwoc Bentonite + 105.4% FW, 12.5 ppg. **Yield** 2.00 cf/sx. **Tail** w/ 1430 sacks (50:50) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 0.5% bwoc FL-52 + 0.5% bwoc Sodium Metasilicate + 57.3% FW, 14.2 ppg. **Yield** 1.28 cf/sx. **TOC @** 600'.

The above cement volumes could be revised pending the caliper measurement from the open hole logs.

5. **Pressure Control Equipment**

The BOP system used to drill the 17-1/2" hole will consist of a 20" 2M Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 2M system prior to drilling out the casing shoe.

The BOP system used to drill the 12-1/4" and 8-3/4" holes will consist of a 13-5/8" 3M Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 3M system prior to drilling out the casing shoe.

The pipe rams will be operated and checked as per Onshore Order No 2. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.

6. **Proposed Mud Circulation System**

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' - 250' <i>see COF</i>	8.4-9.0	30-34	NC	FW
250' - 850'	9.8-10.0	28-32	NC	Brine
850' - 2,700' <i>see COF</i>	8.4-9.0	28-30	NC	FW
2,700' - 13494'	8.6-9.0	28-32	NC-12	FW

The necessary mud products for weight addition and fluid loss control will be on location at all times.

7. **Auxiliary Well Control and Monitoring Equipment:**

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

8. **Logging, Coring, and Testing Program:**

- Drill stem tests will be based on geological sample shows.
- If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.
- The open hole electrical logging program will be:
 - Total Depth to Intermediate Casing
and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
 - Total Depth to Surface
Dual Laterolog-Micro Laterolog with SP
Compensated Neutron with Gamma Ray

- iii. No coring program is planned
- iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

9. Potential Hazards:

- a. No abnormal pressures or temperatures are expected. There is no known presence of H₂S in this area. If H₂S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6 No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3000 psi and Estimated BHT 130°. No H₂S is anticipated to be encountered.

10. Anticipated Starting Date and Duration of Operations:

- a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 32 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

Devon Energy Corporation

HALLIBURTON | Sperry Drilling

Project: Eddy County, NM (NAD 83)
 Site: Burton Flat Deep Unit
 Well: Burton Flat Deep Unit 60H
 Wellbore: Wellbore #1
 Plan: Plan #1
 Rig: TBD



SURFACE LOCATION

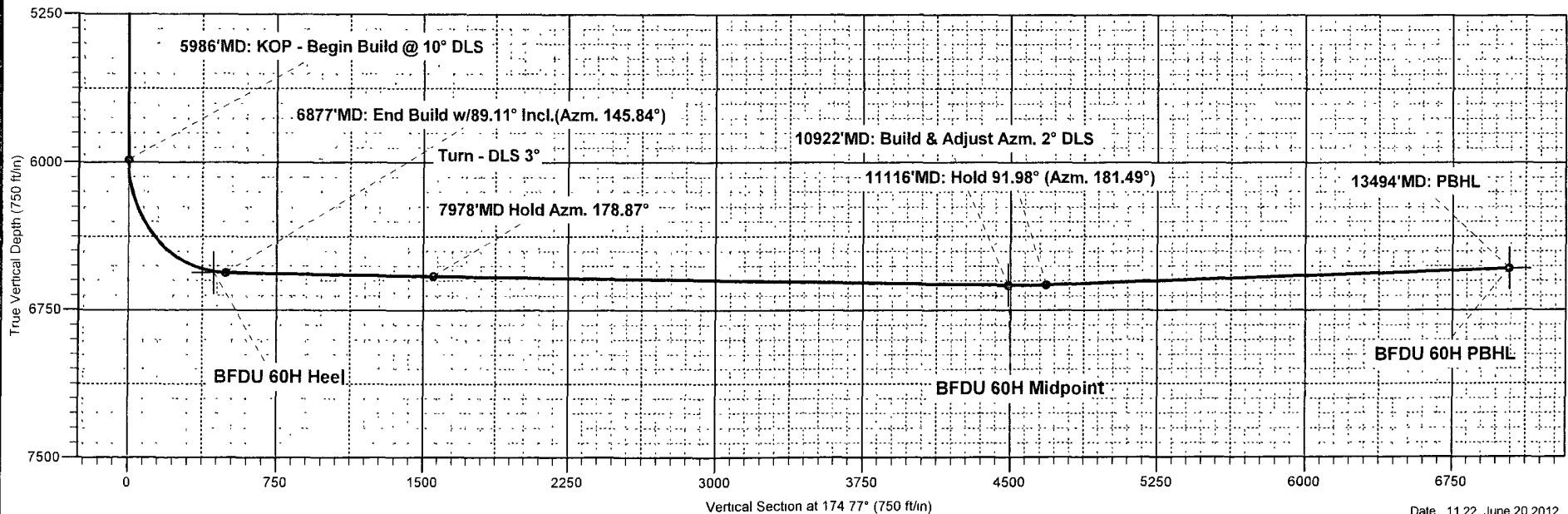
US State Plane 1983
 New Mexico Eastern Zone
 Elevation 3221.7 + 25' @ 3246.70ft (TBD)
 Northing 561267.58 Easting 591667.48 Latitude 32° 32' 34.354 N Longitude 104° 10' 12.010 W

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
BFDU 60H PBHL	6538.00	-7013.97	641.44	554253.61	592308.92	Point
BFDU 60H Heel	6559.00	-408.81	277.43	560858.77	591944.91	Point
BFDU 60H Midpoint	6622.00	-4444.01	703.75	556823.57	592371.23	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5986.11	0.00	0.00	5986.11	0.00	0.00	0.00	0.00	0.00	5986'MD KOP - Begin Build @ 10° DLS
6877.26	89.11	145.84	6559.00	-486.78	316.75	10.00	145.84	493.69	6877'MD End Build w/89.11° Incl (Az. 145.84°)
7978.19	89.11	178.87	6576.50	-1501.32	645.80	3.00	90.26	1553.90	7978'MD Hold Azm 178.87°
10921.80	89.11	178.87	6622.00	-4444.01	703.75	0.00	0.00	4489.63	10922'MD Build & Adjust Azm. 2° DLS
11115.76	91.98	181.49	6620.15	-4637.92	703.14	2.00	42.39	4682.69	11116'MD Hold 91.98° (Az. 181.49°)
13494.02	91.98	181.49	6538.00	-7013.97	641.44	0.00	0.00	7043.24	13494'MD PBHL



Date 11/22, June 20 2012

Project: Eddy County, NM (NAD 83)
 Site: Burton Flat Deep Unit
 Well: Burton Flat Deep Unit 60H
 Wellbore: Wellbore #1
 Plan: Plan #1
 Rig: TBD

SURFACE LOCATION

US State Plane 1983
 New Mexico Eastern Zone
 Elevation 3221 7 + 25' @ 3246 70ft (TBD)

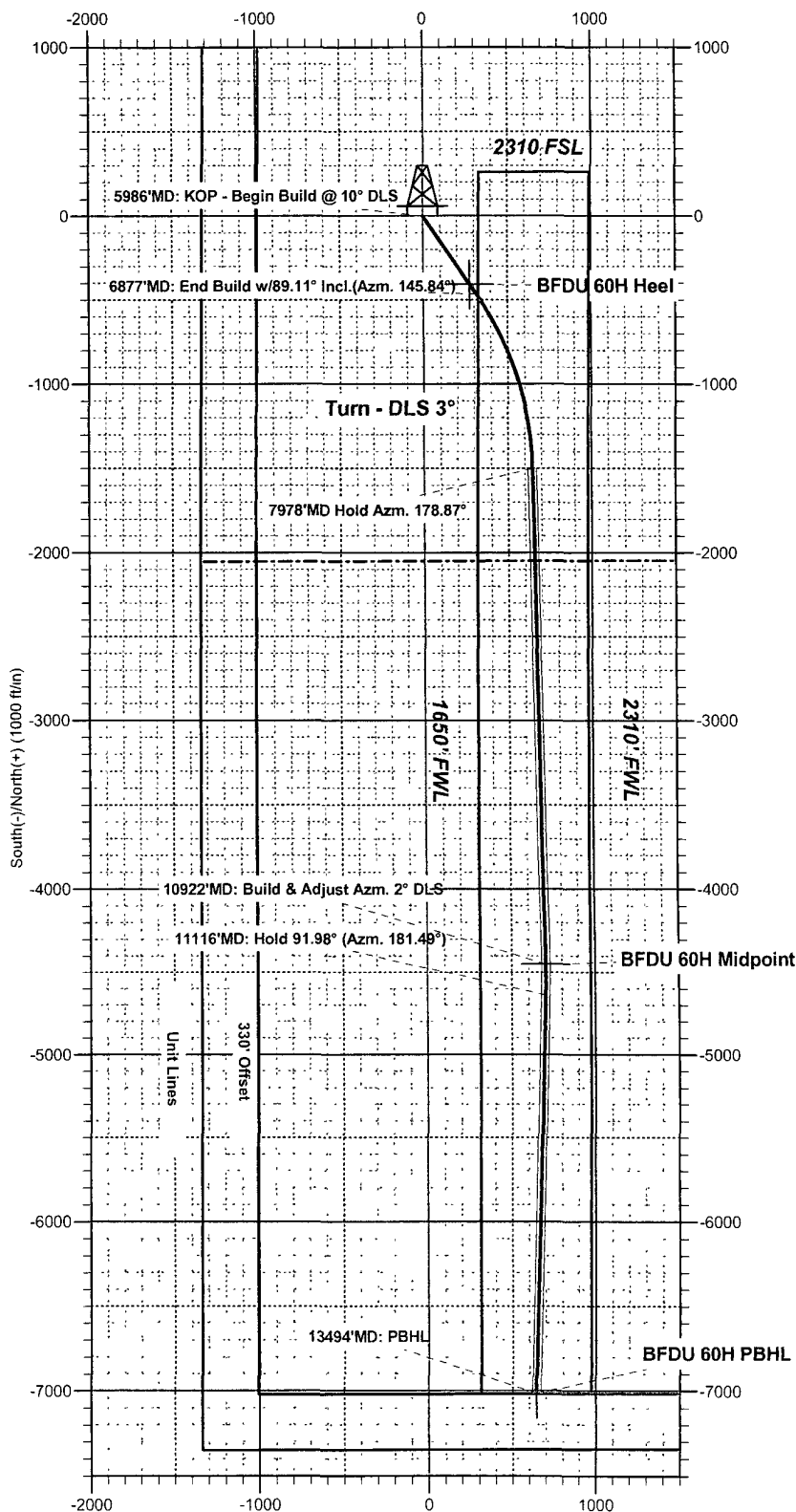
Northing	Easting	Latitude	Longitude
561267 58	591667 48	32° 32' 34 354 N	104° 10' 12 010 W



To convert a Magnetic Direction to a Grid Direction, Add 7 77°

Magnetic Model BGGM2012 Date 20-Jun-12
 Azimuths to Grid North

devon



Devon Energy Corporation

Eddy County, NM (NAD 83)

Burton Flat Deep Unit

Burton Flat Deep Unit 60H

Wellbore #1

Plan: Plan #1

Sperry Drilling Services Proposal Report

20 June, 2012

Well Coordinates 561,267 58 N, 591,667 48 E (32° 32' 34 35" N, 104° 10' 12.01" W)
Ground Level 3,221 70 ft

Local Coordinate Origin.	Centered on Well Burton Flat Deep Unit 60H
Viewing Datum	3221 7 + 25' @ 3246 70ft (TBD)
TVDs to System.	N
North Reference	Grid
Unit System	API - US Survey Feet

Version 2003 16 Build 43I

HALLIBURTON

Plan Report for Burton Flat Deep Unit 60H - Plan #1

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00
100 00	0.00	0 00	100.00	0 00	0 00	0 00	0 00	0 00	0 00	0.00
200 00	0 00	0 00	200 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
300 00	0 00	0 00	300 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00
400 00	0.00	0 00	400 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
500.00	0 00	0.00	500 00	0 00	0.00	0.00	0.00	0.00	0 00	0 00
600.00	0 00	0 00	600 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00
700 00	0 00	0 00	700 00	0 00	0 00	0 00	0 00	0.00	0 00	0 00
800 00	0 00	0 00	800.00	0.00	0 00	0 00	0 00	0 00	0 00	0.00
900 00	0 00	0 00	900 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00
1,000 00	0 00	0.00	1,000 00	0 00	0.00	0.00	0 00	0.00	0.00	0 00
1,100 00	0 00	0 00	1,100.00	0.00	0 00	0 00	0 00	0.00	0 00	0.00
1,200.00	0 00	0 00	1,200 00	0 00	0.00	0 00	0 00	0 00	0.00	0 00
1,300.00	0 00	0 00	1,300 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,400 00	0 00	0 00	1,400 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,500 00	0.00	0 00	1,500 00	0 00	0 00	0 00	0 00	0.00	0 00	0.00
1,600 00	0 00	0.00	1,600.00	0.00	0 00	0 00	0 00	0 00	0 00	0 00
1,700 00	0 00	0 00	1,700 00	0 00	0.00	0 00	0 00	0 00	0.00	0 00
1,800 00	0 00	0 00	1,800 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
1,900 00	0.00	0 00	1,900.00	0.00	0 00	0 00	0 00	0.00	0 00	0 00
2,000 00	0.00	0 00	2,000 00	0 00	0 00	0 00	0.00	0 00	0 00	0 00
2,100 00	0 00	0 00	2,100.00	0 00	0.00	0.00	0 00	0.00	0 00	0 00
2,200 00	0.00	0.00	2,200 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,300 00	0 00	0 00	2,300 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
2,400.00	0 00	0 00	2,400 00	0 00	0 00	0.00	0 00	0 00	0.00	0 00
2,500 00	0 00	0 00	2,500 00	0 00	0 00	0 00	0 00	0.00	0 00	0 00
2,600 00	0 00	0 00	2,600 00	0 00	0.00	0 00	0.00	0.00	0 00	0 00
2,700 00	0 00	0 00	2,700 00	0 00	0.00	0 00	0 00	0 00	0 00	0 00
2,800 00	0 00	0.00	2,800 00	0 00	0 00	0.00	0 00	0 00	0 00	0 00
2,900 00	0 00	0 00	2,900.00	0 00	0 00	0.00	0 00	0 00	0 00	0 00
3,000 00	0 00	0 00	3,000 00	0 00	0 00	0 00	0 00	0.00	0 00	0 00
3,100 00	0.00	0 00	3,100 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00
3,200 00	0 00	0 00	3,200 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
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3,400 00	0 00	0 00	3,400 00	0.00	0 00	0.00	0.00	0.00	0 00	0 00
3,500 00	0 00	0 00	3,500 00	0 00	0 00	0 00	0 00	0.00	0 00	0 00
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3,700 00	0 00	0 00	3,700 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
3,800 00	0 00	0 00	3,800 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
3,900 00	0 00	0 00	3,900 00	0 00	0 00	0.00	0 00	0.00	0.00	0 00
4,000 00	0 00	0 00	4,000 00	0 00	0 00	0.00	0.00	0 00	0 00	0 00
4,100 00	0 00	0 00	4,100 00	0 00	0.00	0 00	0 00	0.00	0 00	0 00
4,200 00	0.00	0 00	4,200 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,300 00	0 00	0 00	4,300 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,400 00	0 00	0 00	4,400 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,500 00	0 00	0 00	4,500.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,600 00	0 00	0 00	4,600 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,700 00	0 00	0 00	4,700 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00
4,800 00	0 00	0 00	4,800.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
4,900 00	0 00	0 00	4,900.00	0 00	0 00	0 00	0 00	0.00	0 00	0 00
5,000 00	0 00	0 00	5,000.00	0.00	0 00	0.00	0 00	0 00	0 00	0 00
5,100 00	0 00	0 00	5,100 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
5,200 00	0 00	0 00	5,200 00	0 00	0 00	0.00	0 00	0 00	0 00	0 00
5,300 00	0 00	0 00	5,300 00	0 00	0 00	0 00	0 00	0.00	0 00	0 00
5,400 00	0 00	0 00	5,400 00	0 00	0 00	0 00	0.00	0 00	0 00	0 00
5,500 00	0.00	0 00	5,500 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
5,600 00	0 00	0 00	5,600 00	0 00	0.00	0 00	0 00	0 00	0 00	0 00
5,700 00	0 00	0 00	5,700 00	0.00	0 00	0 00	0 00	0 00	0 00	0 00
5,800 00	0.00	0 00	5,800 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00

Plan Report for Burton Flat Deep Unit 60H - Plan #1

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,986.11	0.00	0.00	5,986.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5986'MD: KOP - Begin Build @ 10° DLS										
6,000.00	1.39	145.84	6,000.00	-0.14	0.09	0.15	10.00	10.00	0.00	145.84
6,100.00	11.39	145.84	6,099.25	-9.34	6.33	9.87	10.00	10.00	0.00	0.00
6,200.00	21.39	145.84	6,195.07	-32.65	22.16	34.54	10.00	10.00	0.00	0.00
6,300.00	31.39	145.84	6,284.53	-69.39	47.08	73.38	10.00	10.00	0.00	0.00
6,400.00	41.39	145.84	6,364.93	-118.41	80.35	125.24	10.00	10.00	0.00	0.00
6,500.00	51.39	145.84	6,433.82	-178.25	120.96	188.53	10.00	10.00	0.00	0.00
6,600.00	61.39	145.84	6,489.10	-247.08	167.66	261.32	10.00	10.00	0.00	0.00
6,700.00	71.39	145.84	6,529.11	-322.80	219.05	341.41	10.00	10.00	0.00	0.00
6,800.00	81.39	145.84	6,552.61	-403.12	273.55	426.36	10.00	10.00	0.00	0.00
6,807.40	82.13	145.84	6,553.67	-409.18	277.66	432.77	10.00	10.00	0.00	0.00
BFDU 60H Heel										
6,877.26	89.11	145.84	6,559.00	-466.78	316.75	493.69	10.00	10.00	0.00	0.00
6877'MD: End Build w/89.11° Incl.(Az. 145.84°)										
6,900.00	89.11	146.52	6,559.35	-485.67	329.40	513.66	3.00	-0.01	3.00	90.26
Turn - DLS 3°										
7,000.00	89.10	149.52	6,560.91	-570.48	382.35	602.93	3.00	-0.01	3.00	90.25
7,100.00	89.09	152.52	6,562.49	-657.94	430.79	694.44	3.00	-0.01	3.00	90.21
7,200.00	89.08	155.52	6,564.09	-747.82	474.58	787.93	3.00	-0.01	3.00	90.16
7,300.00	89.08	158.52	6,565.69	-839.86	513.60	883.14	3.00	0.00	3.00	90.11
7,400.00	89.08	161.52	6,567.30	-933.82	547.76	979.82	3.00	0.00	3.00	90.06
7,500.00	89.08	164.52	6,568.91	-1,029.44	576.95	1,077.71	3.00	0.00	3.00	90.01
7,600.00	89.08	167.52	6,570.52	-1,126.46	601.09	1,176.52	3.00	0.00	3.00	89.97
7,700.00	89.09	170.53	6,572.12	-1,224.60	620.12	1,275.99	3.00	0.01	3.00	89.92
7,800.00	89.09	173.53	6,573.71	-1,323.61	633.99	1,375.85	3.00	0.01	3.00	89.87
7,900.00	89.10	176.53	6,575.28	-1,423.21	642.66	1,475.83	3.00	0.01	3.00	89.82
7,978.19	89.11	178.87	6,576.50	-1,501.32	645.80	1,553.90	3.00	0.01	3.00	89.78
7978'MD Hold Az. 178.87°										
8,000.00	89.11	178.87	6,576.84	-1,523.13	646.23	1,575.65	0.00	0.00	0.00	0.00
8,100.00	89.11	178.87	6,578.38	-1,623.10	648.20	1,675.38	0.00	0.00	0.00	0.00
8,200.00	89.11	178.87	6,579.93	-1,723.06	650.17	1,775.12	0.00	0.00	0.00	0.00
8,300.00	89.11	178.87	6,581.47	-1,823.03	652.14	1,874.85	0.00	0.00	0.00	0.00
8,400.00	89.11	178.87	6,583.02	-1,923.00	654.10	1,974.58	0.00	0.00	0.00	0.00
8,500.00	89.11	178.87	6,584.56	-2,022.97	656.07	2,074.31	0.00	0.00	0.00	0.00
8,600.00	89.11	178.87	6,586.11	-2,122.94	658.04	2,174.05	0.00	0.00	0.00	0.00
8,700.00	89.11	178.87	6,587.66	-2,222.91	660.01	2,273.78	0.00	0.00	0.00	0.00
8,800.00	89.11	178.87	6,589.20	-2,322.88	661.98	2,373.51	0.00	0.00	0.00	0.00
8,900.00	89.11	178.87	6,590.75	-2,422.85	663.95	2,473.24	0.00	0.00	0.00	0.00
9,000.00	89.11	178.87	6,592.29	-2,522.81	665.92	2,572.98	0.00	0.00	0.00	0.00
9,100.00	89.11	178.87	6,593.84	-2,622.78	667.88	2,672.71	0.00	0.00	0.00	0.00
9,200.00	89.11	178.87	6,595.38	-2,722.75	669.85	2,772.44	0.00	0.00	0.00	0.00
9,300.00	89.11	178.87	6,596.93	-2,822.72	671.82	2,872.17	0.00	0.00	0.00	0.00
9,400.00	89.11	178.87	6,598.48	-2,922.69	673.79	2,971.91	0.00	0.00	0.00	0.00
9,500.00	89.11	178.87	6,600.02	-3,022.66	675.76	3,071.64	0.00	0.00	0.00	0.00
9,600.00	89.11	178.87	6,601.57	-3,122.63	677.73	3,171.37	0.00	0.00	0.00	0.00
9,700.00	89.11	178.87	6,603.11	-3,222.59	679.70	3,271.10	0.00	0.00	0.00	0.00
9,800.00	89.11	178.87	6,604.66	-3,322.56	681.66	3,370.84	0.00	0.00	0.00	0.00
9,900.00	89.11	178.87	6,606.21	-3,422.53	683.63	3,470.57	0.00	0.00	0.00	0.00
10,000.00	89.11	178.87	6,607.75	-3,522.50	685.60	3,570.30	0.00	0.00	0.00	0.00
10,100.00	89.11	178.87	6,609.30	-3,622.47	687.57	3,670.03	0.00	0.00	0.00	0.00
10,200.00	89.11	178.87	6,610.84	-3,722.44	689.54	3,769.77	0.00	0.00	0.00	0.00
10,300.00	89.11	178.87	6,612.39	-3,822.41	691.51	3,869.50	0.00	0.00	0.00	0.00
10,400.00	89.11	178.87	6,613.93	-3,922.38	693.47	3,969.23	0.00	0.00	0.00	0.00
10,500.00	89.11	178.87	6,615.48	-4,022.34	695.44	4,068.96	0.00	0.00	0.00	0.00
10,600.00	89.11	178.87	6,617.03	-4,122.31	697.41	4,168.70	0.00	0.00	0.00	0.00
10,700.00	89.11	178.87	6,618.57	-4,222.28	699.38	4,268.43	0.00	0.00	0.00	0.00
10,800.00	89.11	178.87	6,620.12	-4,322.25	701.35	4,368.16	0.00	0.00	0.00	0.00

Plan Report for Burton Flat Deep Unit 60H - Plan #1

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
10,900.00	89.11	178.87	6,621.66	-4,422.22	703.32	4,467.89	0.00	0.00	0.00	0.00
10,921.80	89.11	178.87	6,622.00	-4,444.01	703.75	4,489.63	0.00	0.00	0.00	0.00
10922'MD: Build & Adjust Azm. 2° DLS - BFDU 60H Midpoint										
11,000.00	90.27	179.93	6,622.42	-4,522.20	704.57	4,567.58	2.00	1.48	1.35	42.39
11,100.00	91.75	181.27	6,620.66	-4,622.18	703.52	4,667.04	2.00	1.48	1.35	42.38
11,115.76	91.98	181.49	6,620.15	-4,637.92	703.14	4,682.69	2.00	1.48	1.35	42.40
11116'MD: Hold 91.98° (Azm. 181.49°)										
11,200.00	91.98	181.49	6,617.24	-4,722.09	700.95	4,766.30	0.00	0.00	0.00	111.77
11,300.00	91.98	181.49	6,613.78	-4,821.99	698.36	4,865.56	0.00	0.00	0.00	0.00
11,400.00	91.98	181.49	6,610.33	-4,921.90	695.77	4,964.81	0.00	0.00	0.00	0.00
11,500.00	91.98	181.49	6,606.88	-5,021.81	693.17	5,064.07	0.00	0.00	0.00	0.00
11,600.00	91.98	181.49	6,603.42	-5,121.71	690.58	5,163.32	0.00	0.00	0.00	0.00
11,700.00	91.98	181.49	6,599.97	-5,221.62	687.98	5,262.58	0.00	0.00	0.00	0.00
11,800.00	91.98	181.49	6,596.51	-5,321.53	685.39	5,361.83	0.00	0.00	0.00	0.00
11,900.00	91.98	181.49	6,593.06	-5,421.43	682.79	5,461.09	0.00	0.00	0.00	0.00
12,000.00	91.98	181.49	6,589.61	-5,521.34	680.20	5,560.34	0.00	0.00	0.00	0.00
12,100.00	91.98	181.49	6,586.15	-5,621.25	677.61	5,659.60	0.00	0.00	0.00	0.00
12,200.00	91.98	181.49	6,582.70	-5,721.15	675.01	5,758.85	0.00	0.00	0.00	0.00
12,300.00	91.98	181.49	6,579.24	-5,821.06	672.42	5,858.11	0.00	0.00	0.00	0.00
12,400.00	91.98	181.49	6,575.79	-5,920.97	669.82	5,957.36	0.00	0.00	0.00	0.00
12,500.00	91.98	181.49	6,572.33	-6,020.87	667.23	6,056.62	0.00	0.00	0.00	0.00
12,600.00	91.98	181.49	6,568.88	-6,120.78	664.63	6,155.87	0.00	0.00	0.00	0.00
12,700.00	91.98	181.49	6,565.43	-6,220.69	662.04	6,255.13	0.00	0.00	0.00	0.00
12,800.00	91.98	181.49	6,561.97	-6,320.59	659.45	6,354.38	0.00	0.00	0.00	0.00
12,900.00	91.98	181.49	6,558.52	-6,420.50	656.85	6,453.64	0.00	0.00	0.00	0.00
13,000.00	91.98	181.49	6,555.06	-6,520.41	654.26	6,552.89	0.00	0.00	0.00	0.00
13,100.00	91.98	181.49	6,551.61	-6,620.31	651.66	6,652.15	0.00	0.00	0.00	0.00
13,200.00	91.98	181.49	6,548.16	-6,720.22	649.07	6,751.40	0.00	0.00	0.00	0.00
13,300.00	91.98	181.49	6,544.70	-6,820.13	646.47	6,850.66	0.00	0.00	0.00	0.00
13,400.00	91.98	181.49	6,541.25	-6,920.03	643.88	6,949.91	0.00	0.00	0.00	0.00
13,494.02	91.98	181.49	6,538.00	-7,013.97	641.44	7,043.24	0.00	0.00	0.00	0.00
13494'MD: PBHL - BFDU 60H PBHL										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
5,986.11	5,986.11	0.00	0.00	5986'MD: KOP - Begin Build @ 10° DLS
6,877.26	6,559.00	-466.78	316.75	6877'MD End Build w/89 11° Incl (Azm 145 84°)
6,900.00	6,559.35	-485.67	329.40	Turn - DLS 3°
7,978.19	6,576.50	-1,501.32	645.80	7978'MD Hold Azm 178 87°
10,921.80	6,622.00	-4,444.01	703.75	10922'MD Build & Adjust Azm. 2° DLS
11,115.76	6,620.15	-4,637.92	703.14	11116'MD Hold 91 98° (Azm 181 49°)
13,494.02	6,538.00	-7,013.97	641.44	13494'MD PBHL

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (ft)	+E/-W (ft)	Start TVD (ft)
TD	No Target (Freehand)	174.77	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	13,494.02	Plan #1	MWD

Plan Report for Burton Flat Deep Unit 60H - Plan #1

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
BFDU 60H Midpoint	6,622 00	-4,444.01	703.75	Point
BFDU 60H Heel	6,559 00	-408 81	277 43	Point
BFDU 60H PBHL	6,538 00	-7,013.97	641 44	Point

North Reference Sheet for Burton Flat Deep Unit - Burton Flat Deep Unit 60H - Wellbore #1

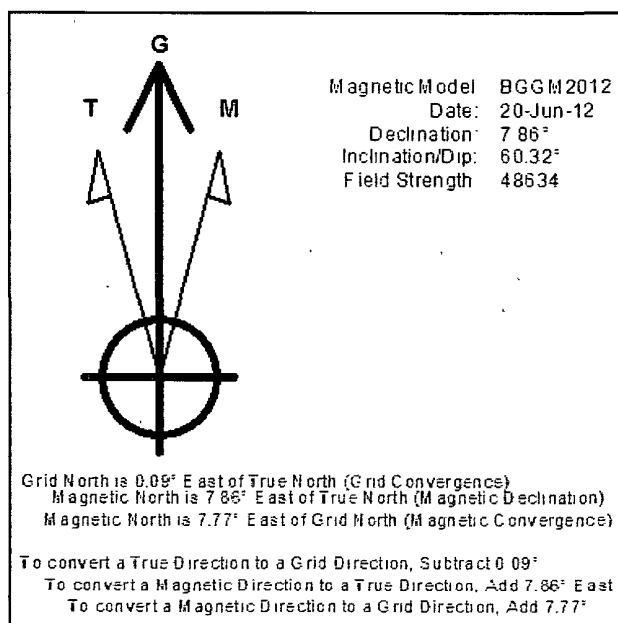
All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.
Vertical Depths are relative to 3221.7 + 25' @ 3246.70ft (TBD). Northing and Easting are relative to Burton Flat Deep Unit 60H.
Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980.

Projection method is Transverse Mercator (Gauss-Kruger).
Central Meridian is -104.33°, Longitude Origin 0° 0' 0.000 E°, Latitude Origin 0° 0' 0.000 N°.
False Easting 541,337.50ft, False Northing: 0.00ft, Scale Reduction: 0.99991199.

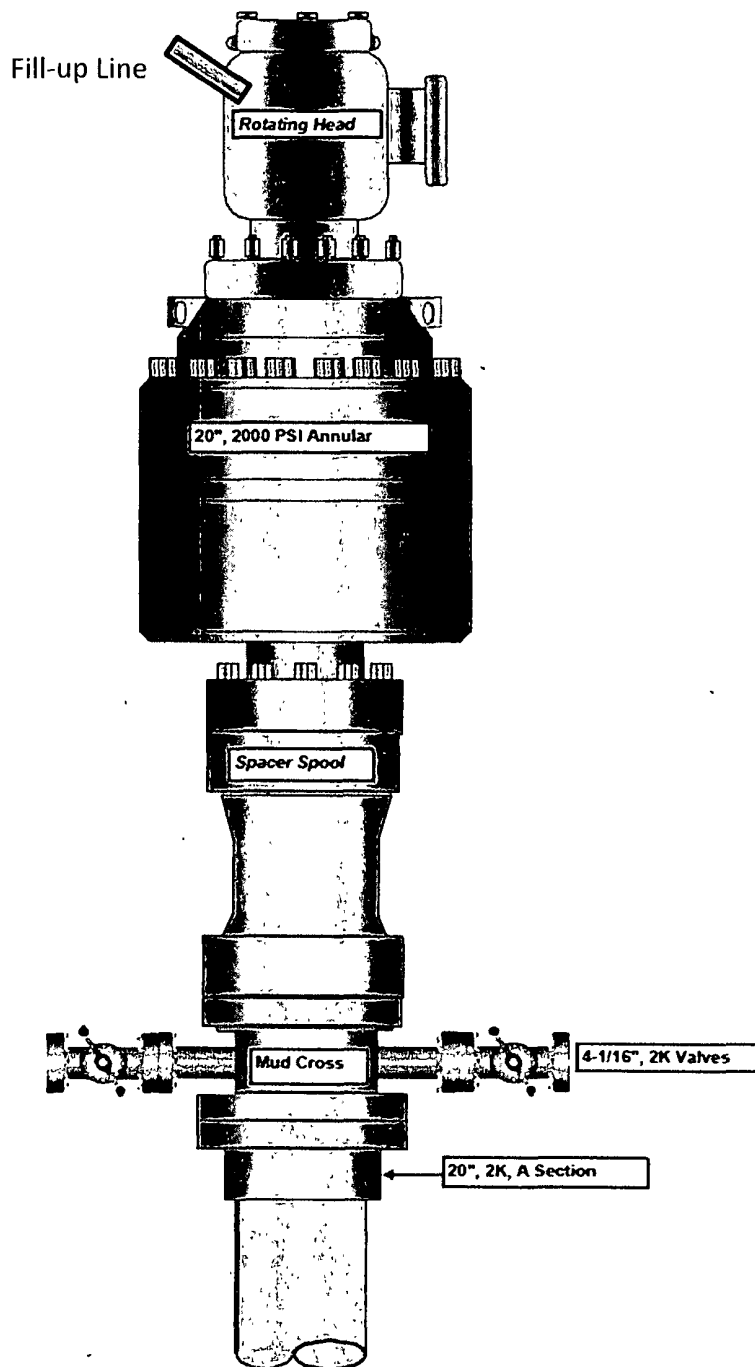
Grid Coordinates of Well: 561,267.58 ft N, 591,667.48 ft E.
Geographical Coordinates of Well: 32° 32' 34.35" N, 104° 10' 12.01" W.
Grid Convergence at Surface is: 0.09°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 13,494.02ft, the Bottom Hole Displacement is 7,043.24ft in the Direction of 174.77° (Grid).

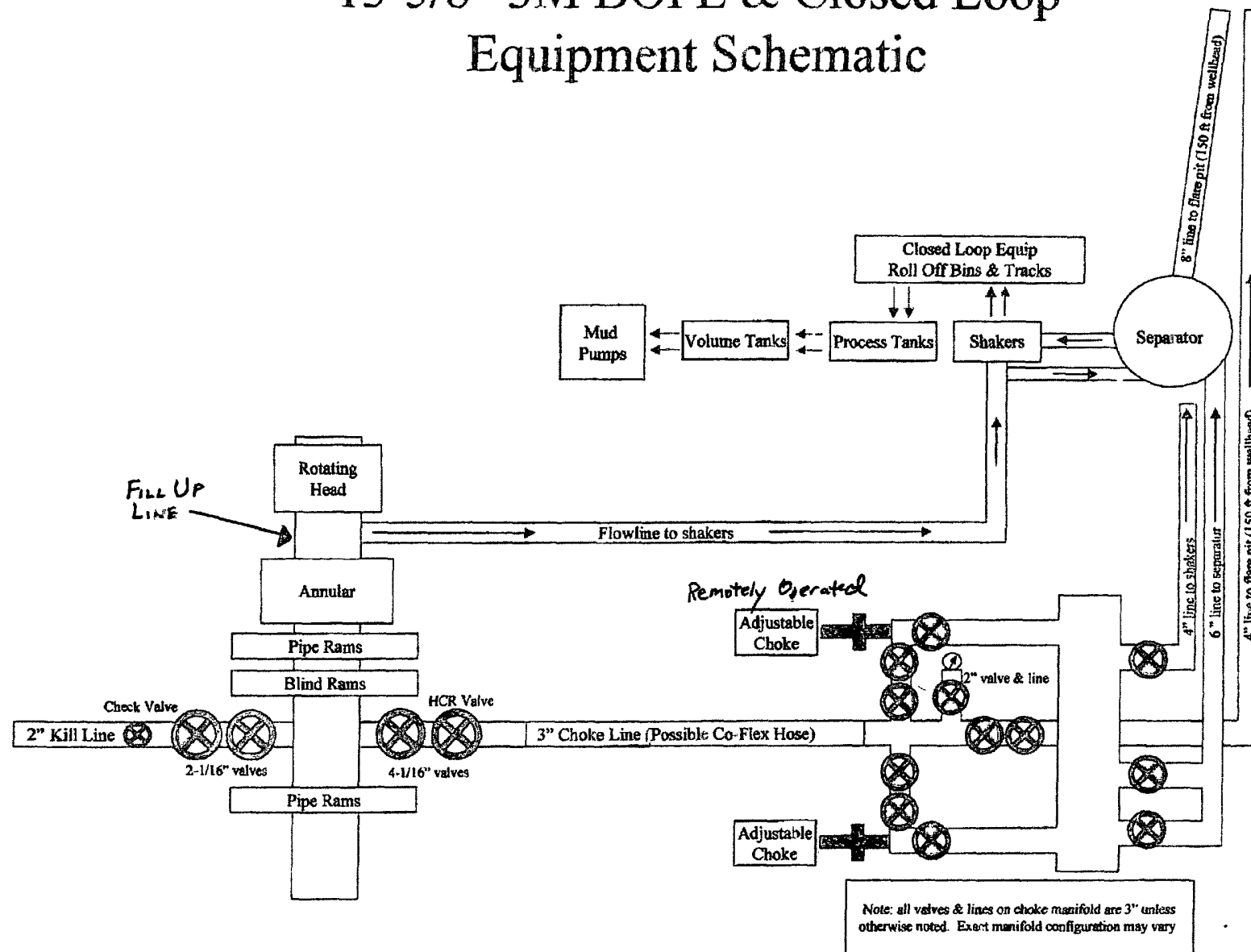
Magnetic Convergence at surface is: -7.77° (20 June 2012, BGGM2012).



20" 2K Annular



13-5/8" 3M BOPE & Closed Loop Equipment Schematic





**Devon Energy Corporation
20 North Broadway
Oklahoma City, Oklahoma 73102-8260**

Hydrogen Sulfide (H₂S) Contingency Plan

For

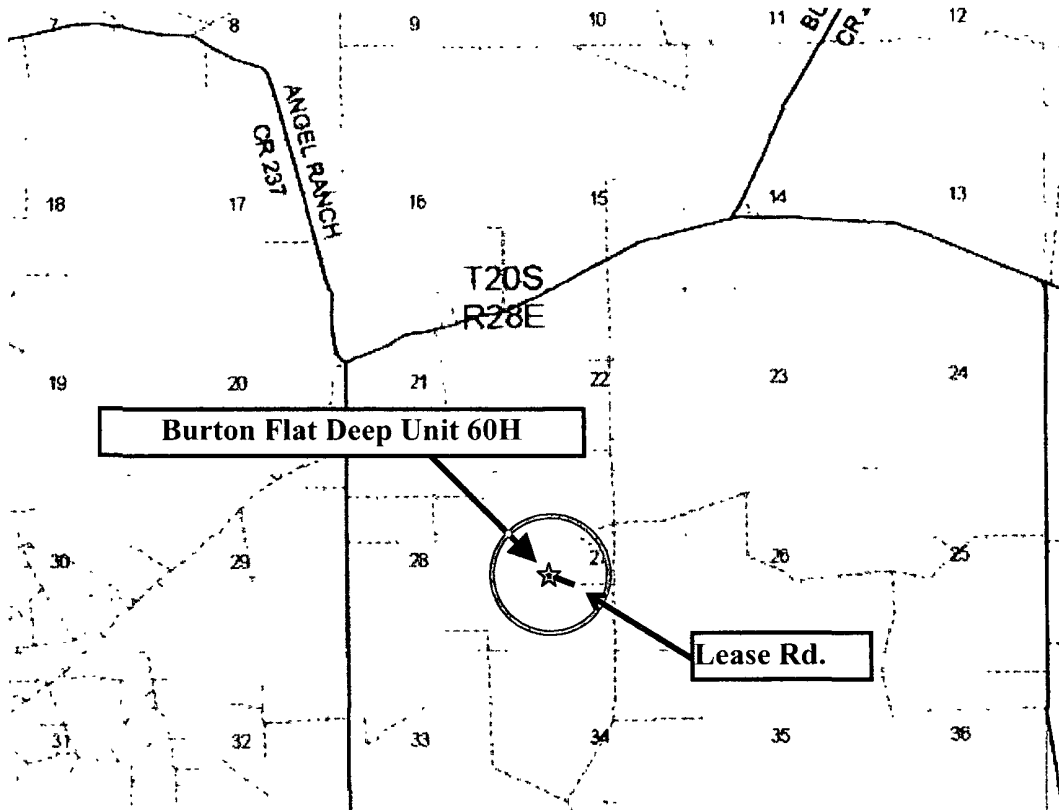
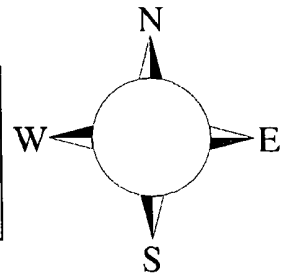
Burton Flat Deep Unit 60H

**Sec-27, T-20S R-28E
2050' FSL & 1320' FWL,
LAT. = 32.5428760'N (NAD83)
LONG = 104.1700027'W**

Eddy County NM

Burton Flat Deep Unit 60H

This is an open drilling site. H₂S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H₂S, including warning signs, wind indicators and H₂S monitor.



Assumed 100 ppm H₂S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road, East then North or South on primitive road. Crews should then block both directions of the road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE. However, there is a ranch home approximately 1.5 miles West from the location. Steps should be taken to communicate with them in case of a release.

Assumed 100 ppm ROE = 3000'

100 ppm H₂S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H₂S monitors and air packs in order to control the release.
- Use the “buddy system” to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
 - Detection of H₂S, and
 - Measures for protection against the gas,
 - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H₂S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO₂	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico’s ‘Hazardous Materials Emergency Response Plan’ (HMER)

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE (H₂S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H₂S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H₂S metal components. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H₂S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan and the Public Protection Plan.

II. HYDROGEN SULFIDE TRAINING

Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H₂S.

1. Well Control Equipment

- A. Flare line
- B. Choke manifold
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment may include if applicable: annular preventer and rotating head.

2. Protective equipment for essential personnel:

- A. 30-minute SCBA units located in the doghouse and at briefing areas, as indicated on well site diagram. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

3. H₂S detection and monitoring equipment:

- A. Portable H₂S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S levels of 20 PPM are reached. These units are usually capable of detecting SO₂, which is a byproduct of burning H₂S.

4. Visual warning systems:

- A. Wind direction indicators as shown on well site diagram
- B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate..

5. Mud program:

- A. The mud program has been designed to minimize the volume of H₂S circulated to surface. Proper mud weight, safe drilling practices and the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones.

Devon Energy Corp. Company Call List

<u>Artesia (575)</u>	<u>Cellular</u>	<u>Office</u>	<u>Home</u>
Foreman – Robert Bell.....	748-7448	748-0178	746-2991
Asst. Foreman –Tommy Polly.....	748-5290	748-0165	748-2846
Don Mayberry	748-5235	748-0164	746-4945
Montral Walker.....	390-5182	748-0193	936-414-6246
Engineer – Marcos Ortiz.....	(405) 317-0666....	(405) 552-8152....	(405) 381-4350

Agency Call List

<u>Lea</u>	<u>Hobbs</u>
<u>County</u>	State Police
<u>(575)</u>	City Police
	Sheriff's Office
	Ambulance.....
	Fire Department.....
	LEPC (Local Emergency Planning Committee).....
	NMOCD
	US Bureau of Land Management

<u>Eddy</u>	<u>Carlsbad</u>
<u>County</u>	State Police
<u>(575)</u>	City Police
	Sheriff's Office
	Ambulance.....
	Fire Department.....
	LEPC (Local Emergency Planning Committee).....
	US Bureau of Land Management
	New Mexico Emergency Response Commission (Santa Fe) ...
	24 HR
	National Emergency Response Center (Washington, DC) ..

Emergency Services

	Boots & Coots IWC
	Cudd Pressure Control.....
	Halliburton
	B. J. Services.....
<i>Give</i>	Flight For Life - Lubbock, TX
<i>GPS</i>	Aerocare - Lubbock, TX
<i>position:</i>	Med Flight Air Amb - Albuquerque, NM
	Lifeguard Air Med Svc. Albuquerque, NM

Prepared in conjunction with
Wade Rohloff



Prevailing Wind
 Direction S, SW





Proposed Interim Site Reclamation

Devon Energy Production Co.
BFDU 59H
2035.5' FSL & 1272.3' FWL
Sec. 27-T20S-R28E
Eddy County, NM

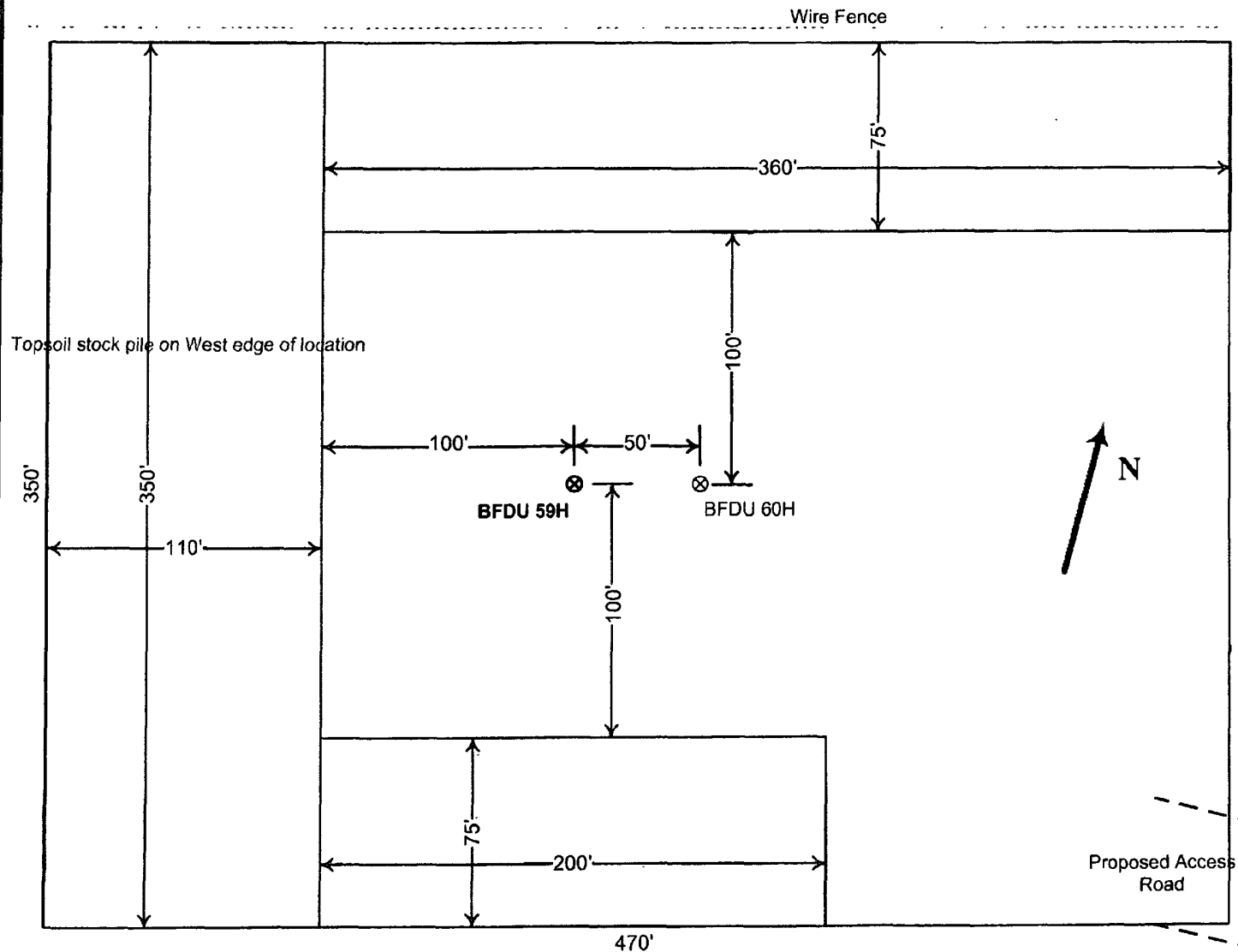


Proposed
Reclamation
Area



Scale: 1 in = 60ft.

Proposed Production Facility at the BFDU 47H well pad in Sec. 28-T20S-R28E



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY
LEASE NO.:	NM0428854
WELL NAME & NO.:	60H-BURTON FLAT DEEP UNIT
SURFACE HOLE FOOTAGE:	2050'/S. & 1319'/W.
BOTTOM HOLE FOOTAGE:	330'S/. & 1980'/W. (Sec. 34)
LOCATION:	Section 27, T. 20 S., R. 28 E., NMPM
COUNTY:	Eddy County, New Mexico

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Cave/Karst
 - Commercial well determination
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - High Cave/Karst
 - Logging Requirements
 - Mud logger / casing depth
 - Waste Material and Fluids
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines – not requested
 - Electric Lines – not requested
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**