

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY 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.
NMNM58938

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
BILBREY 33 FED COM 4H

9. API Well No.
30-025-41807-00-X1

10. Field and Pool, or Exploratory
BILBREY BASIN

11. County or Parish, and State
LEA COUNTY, NM

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
DEVON ENERGY PRODUCTION CO LP
Contact: DAVID H COOK
Email: david.cook@dvn.com

3a. Address
333 WEST SHERIDAN AVE
OKLAHOMA CITY, OK 73102

3b. Phone No. (include area code)
Ph: 405-552-7848

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

Sec 33 T21S R32E NESE 2600FSL 1300FEL
32.435096 N Lat, 103.675391 W Lon

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

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 recomple 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Devon Energy Production Co., L.P. respectfully requests expedited approval to change the approved APD as follows:

- Change bottom hole location footages from 330 FNL & 660 FEL to 330 FNL & 885 FEL; Unit A; 28-21S-32E.
- Change TD MD from 18,310' to 18,049' & TVD from 10,591' to 10,644'.
- No change to cement volumes.
- Utilize 3M BOP system for intermediate BOP equipment test.

Attached are revised C-102, Revised directional survey & 3M BOP schematic.

**SEE ATTACHED FOR
CONDITIONS OF APPROV.**

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #250801 verified by the BLM Well Information System

For DEVON ENERGY PRODUCTION CO LP, sent to the Hobbs

Committed to AFMSS for processing by JENNIFER MASON on 06/25/2014 (14JAM0059SE)

Name (Printed/Typed) DAVID H COOK

Title REGULATORY SPECIALIST

Signature (Electronic Submission)

Date 06/25/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

JUL 01 2014

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6180
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

HOBBS OIL

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-41807		² Pool Code 5695		³ Pool Name BILBREY BASIN; BONE SPRING	
⁴ Property Code 313143		⁵ Property Name BILBREY 33 FED COM			⁶ Well Number 4H
⁷ OGRID No. 6137		⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.			⁹ Elevation 3729.1

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	33	21 S	32 E		2600	SOUTH	1300	EAST	LEA

¹¹ 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	28	21 S	32 E		330	NORTH	885	EAST	LEA

¹² Dedicated Acres 240	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.

NW CORNER SEC. 28 LAT. = 32.4569393°N LONG. = 103.6882813°W NMSP EAST (FT) N = 530566.55 E = 740299.70 W/4 CORNER SEC. 28 LAT. = 32.4496894°N LONG. = 103.6882898°W NMSP EAST (FT) N = 527928.98 E = 740313.03 SECTION CORNER LAT. = 32.4424274°N LONG. = 103.6882910°W NMSP EAST (FT) N = 525287.05 E = 740328.62 W/4 CORNER SEC. 33 LAT. = 32.4351698°N LONG. = 103.6882970°W NMSP EAST (FT) N = 522646.69 E = 740342.69 SW CORNER SEC. 33 LAT. = 32.4279074°N LONG. = 103.6883007°W NMSP EAST (FT) N = 520004.58 E = 740357.53		N/4 CORNER SEC. 28 LAT. = 32.4569769°N LONG. = 103.6797333°W NMSP EAST (FT) N = 530586.27 E = 742936.26 QUARTER CORNER LAT. = 32.4424528°N LONG. = 103.6797451°W NMSP EAST (FT) N = 525312.30 E = 742964.96 S/4 CORNER SEC. 33 LAT. = 32.4279344°N LONG. = 103.6797450°W NMSP EAST (FT) N = 520030.45 E = 742997.32		BOTTOM OF HOLE LAT. = 32.4561022°N LONG. = 103.6740418°W NMSP EAST (FT) N = 530288.83 E = 744693.74 BILBREY "33" FED COM #4H ELEV. = 3729.1 LAT. = 32.4350958°N (NAD83) LONG. = 103.6753908°W NMSP EAST (FT) N = 522644.05 E = 744324.74 SURFACE LOCATION		NE CORNER SEC. 28 LAT. = 32.4570252°N LONG. = 103.6711736°W NMSP EAST (FT) N = 530830.10 E = 745576.37 E/4 CORNER SEC. 28 LAT. = 32.4497418°N LONG. = 103.6711715°W NMSP EAST (FT) N = 527980.38 E = 745593.45 SECTION CORNER LAT. = 32.4424830°N LONG. = 103.6711771°W NMSP EAST (FT) N = 525339.59 E = 745608.11 E/4 CORNER SEC. 33 LAT. = 32.4352241°N LONG. = 103.6711780°W NMSP EAST (FT) N = 522698.76 E = 745624.19 SE CORNER SEC. 33 LAT. = 32.4279661°N LONG. = 103.6711810°W NMSP EAST (FT) N = 520058.28 E = 745639.63	
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17 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 or has a right to drill this well at this 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: *David H. Cook* Date: 6/25/2014

David H. Cook Regulatory Specialist
Printed Name

david.cook@dvn.com
E-mail Address

18 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.

JUNE 24, 2014

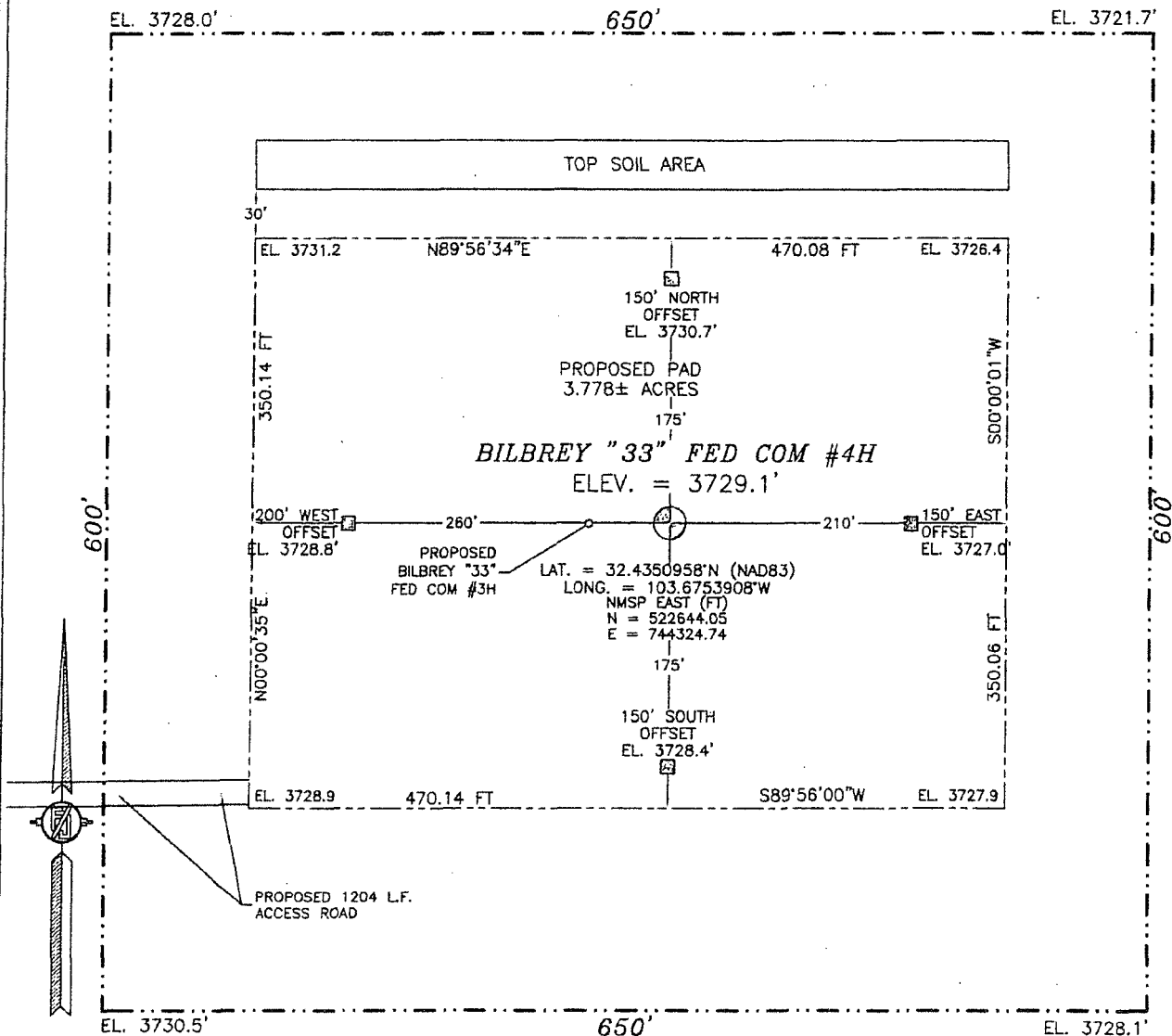
Date of Survey

Signature and Seal of Registered Surveyor: *[Signature]*
Certificate Number: 12797
SURVEY NO. 2205A

PP: 2600 FSL & 1300 FEL; 33-21S-32E

SECTION 33, TOWNSHIP 21 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
SITE MAP

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE.



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HWY 62-180 AND CAMPBELL ROAD GO SOUTH ON CAMPBELL ROAD APPROX. 8.9 MILES TO LEASE ROAD ON LEFT (EAST) TURN EAST ON LEASE ROAD GO APPROX. 0.7 MILES ROAD TURNS LEFT (NORTH) GO NORTH APPROX. 0.5 MILES ROAD TURNS RIGHT (EAST) GO EAST APPROX. 1.9 MILES ROAD TURNS RIGHT (SOUTH) GO SOUTH APPROX. 0.1 MILES TO ROAD LATH WITH WHITE AND RED FLAGGING ON EAST SIDE OF ROAD FOLLOW ROAD LATHS (EAST) APPROX. 0.21 MILES TO LOCATION

DEVON ENERGY PRODUCTION COMPANY, L.P.

BILBREY "33" FED COM #4H

LOCATED 2600 FT. FROM THE SOUTH LINE
AND 1300 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 21 SOUTH,
RANGE 32 EAST, N.M.P.M.

LEA COUNTY, STATE OF NEW MEXICO

JUNE 24, 2014

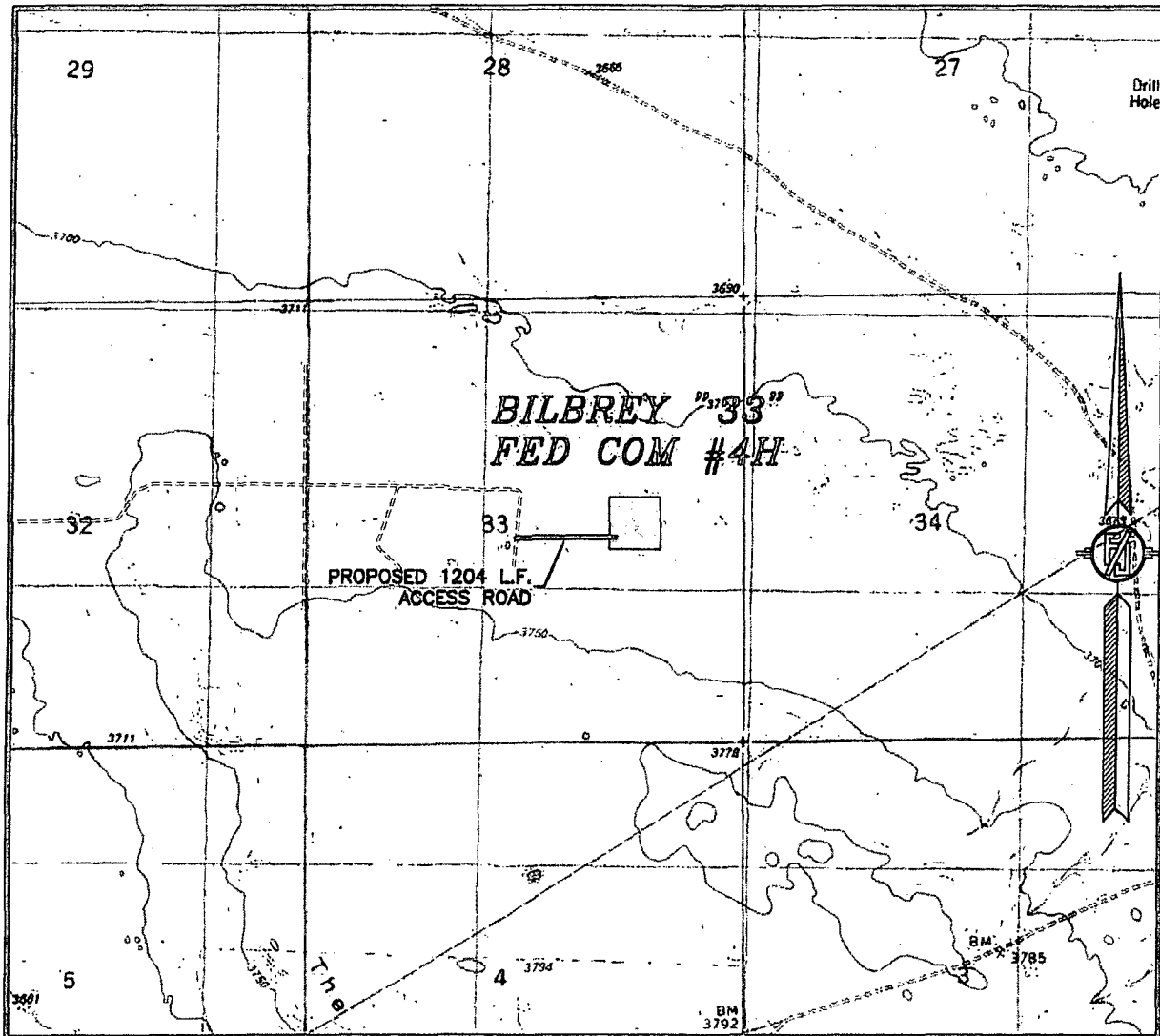
SURVEY NO. 2205A

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

SECTION 33, TOWNSHIP 21 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
THE DIVIDE

NOT TO SCALE

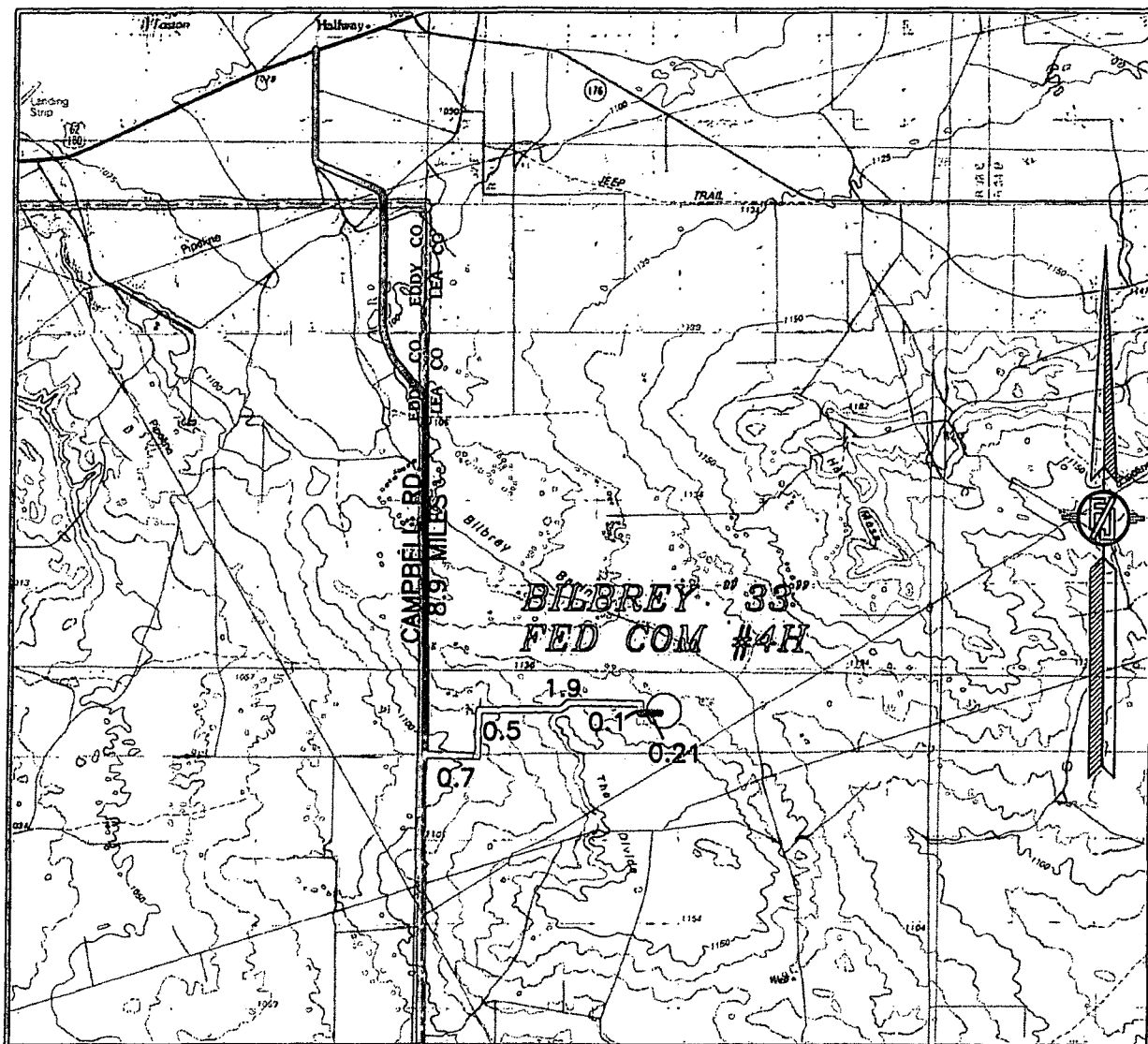
DEVON ENERGY PRODUCTION COMPANY, L.P.
BILBREY "33" FED COM #4H
LOCATED 2600 FT. FROM THE SOUTH LINE
AND 1300 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 21 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

JUNE 24, 2014

SURVEY NO. 2205A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 33, TOWNSHIP 21 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HWY 82-180 AND CAMPBELL ROAD GO SOUTH ON CAMPBELL ROAD APPROX. 8.9 MILES TO LEASE ROAD ON LEFT (EAST) TURN EAST ON LEASE ROAD GO APPROX. 0.7 MILES ROAD TURNS LEFT (NORTH) GO NORTH APPROX. 0.5 MILES ROAD TURNS RIGHT (EAST) GO EAST APPROX. 1.9 MILES ROAD TURNS RIGHT (SOUTH) GO SOUTH APPROX. 0.1 MILES TO ROAD LATH WITH WHITE AND RED FLAGGING ON EAST SIDE OF ROAD FOLLOW ROAD LATHS (EAST) APPROX 0.21 MILES TO LOCATION

DEVON ENERGY PRODUCTION COMPANY, L.P.

BILBREY "33" FED COM #4H

LOCATED 2600 FT. FROM THE SOUTH LINE

AND 1300 FT. FROM THE EAST LINE OF

SECTION 33, TOWNSHIP 21 SOUTH,

RANGE 32 EAST, N.M.P.M.

LEA COUNTY, STATE OF NEW MEXICO

JUNE 24, 2014

SURVEY NO. 2205A

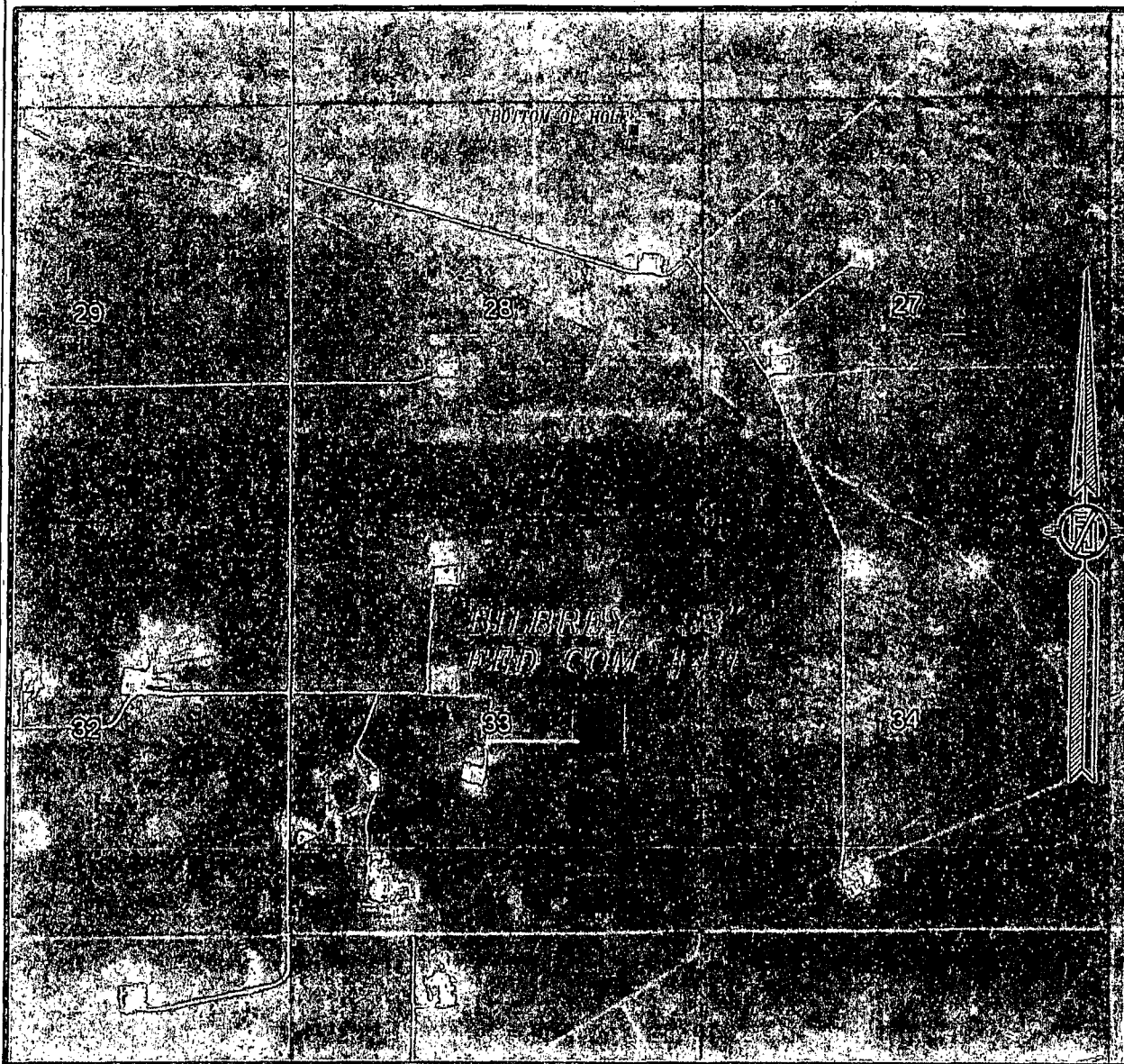
MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

SECTION 33, TOWNSHIP 21 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MARCH 2012

DEVON ENERGY PRODUCTION COMPANY, L.P.

BILBREY "33" FED COM #4H

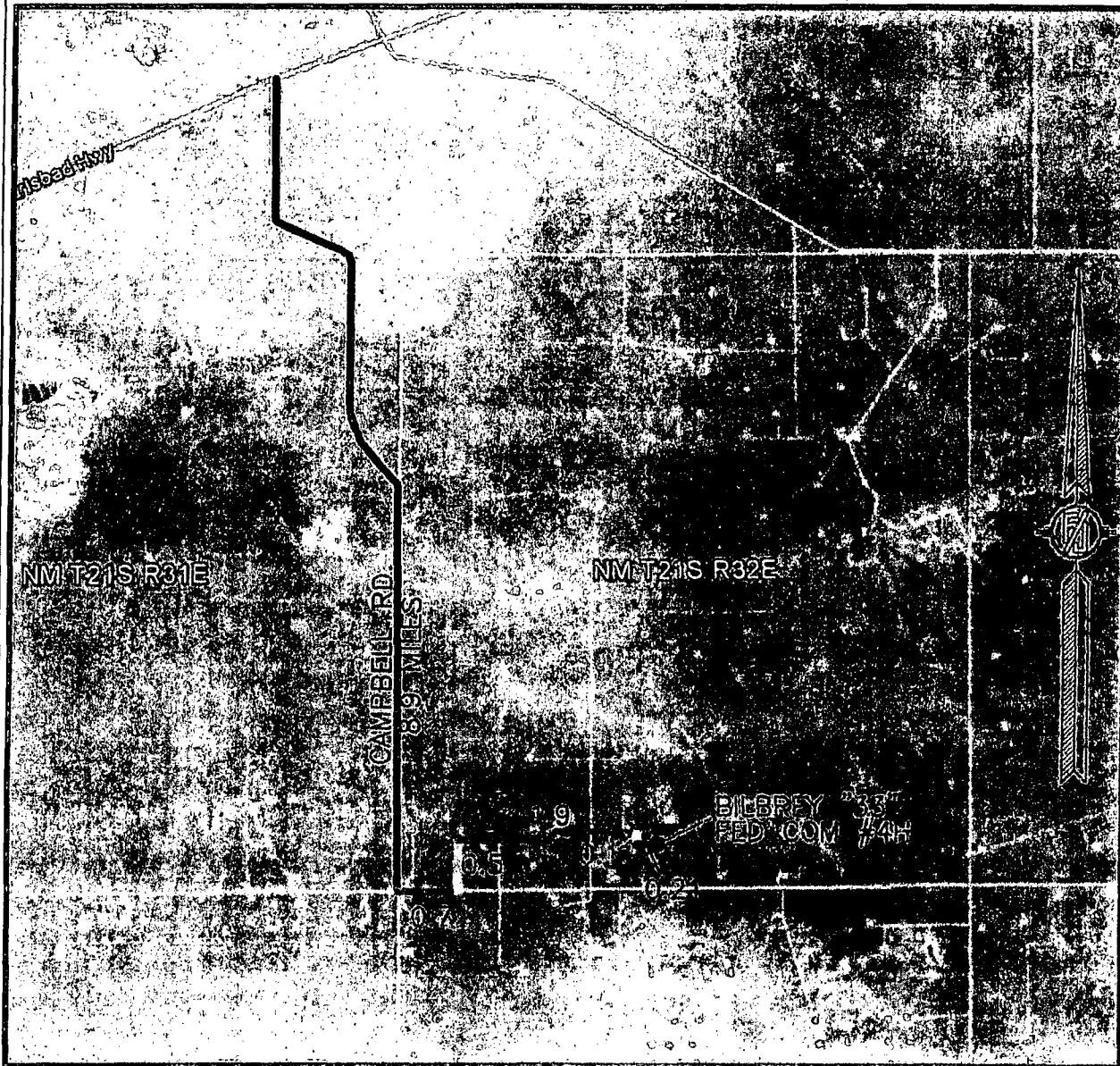
LOCATED 2600 FT. FROM THE SOUTH LINE
AND 1300 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 21 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

JUNE 24, 2014

SURVEY NO. 2205A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 33, TOWNSHIP 21 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MARCH 2012

DEVON ENERGY PRODUCTION COMPANY, L.P.

BILBREY "33" FED COM #4H

LOCATED 2600 FT. FROM THE SOUTH LINE
AND 1300 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 21 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

JUNE 24, 2014

SURVEY NO. 2205A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

DEVON ENERGY

HOBBS OCD

Project: Lea County, NM (NAD-83)

Site: Bilbrey 33 Fed Com

Well: 4H

JUN 30 2014

devon

Design: Plan #1

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PROJECT DETAILS: Lea County, NM (NAD-83)

Geodetic System: US State Plane 1983

Datum: North American Datum 1983

Ellipsoid: GRS 1980

Zone: New Mexico Eastern Zone



Azimuths to Grid North
True North: -0.35°
Magnetic North: 7.04°

Magnetic Field
Strength: 48405.0snT
Dip Angle: 60.28°
Date: 6/16/2014
Model: BGGM2013

DESIGN TARGET DETAILS

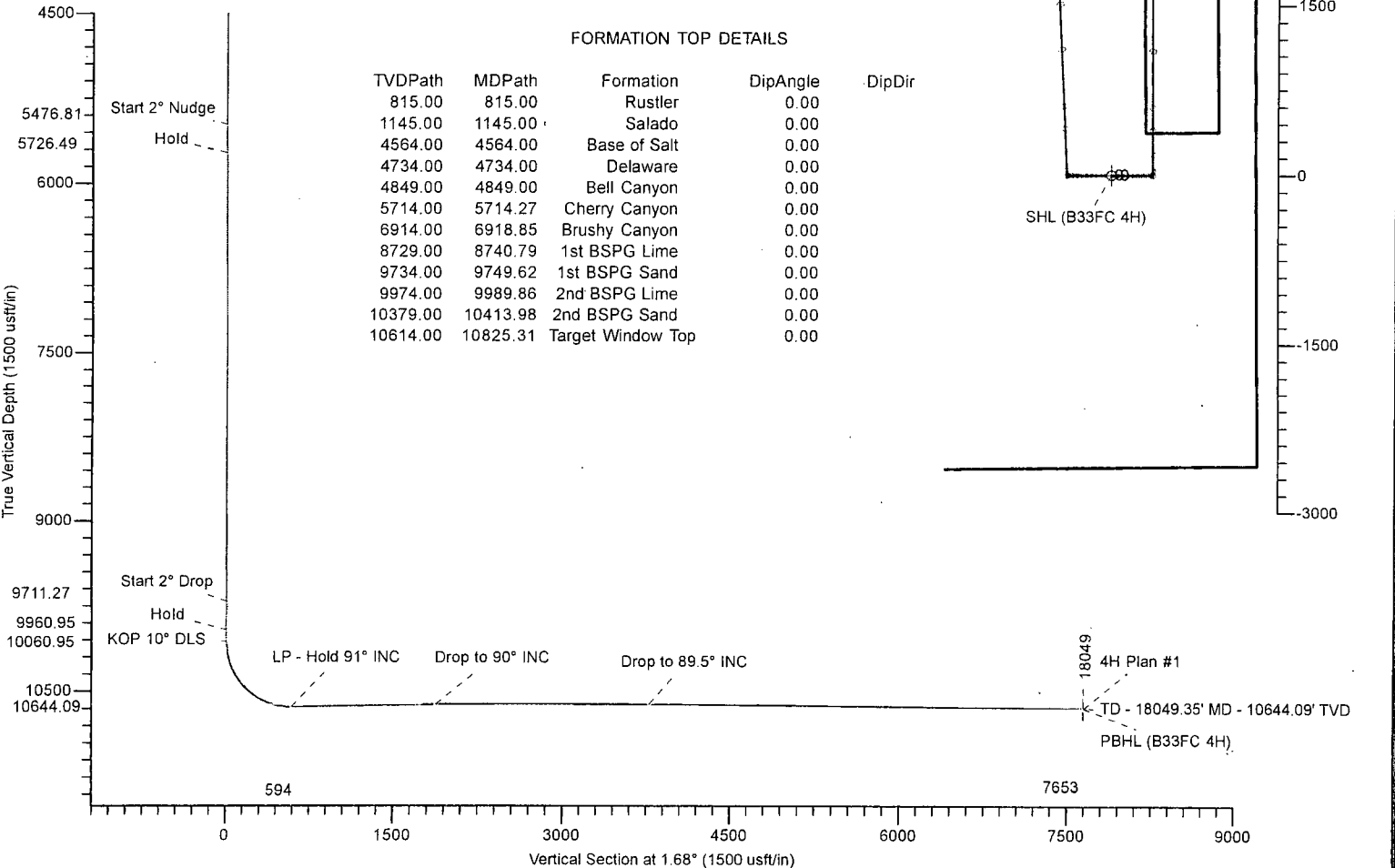
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Bilbrey 27 1	0.00	5974.64	3387.57	528618.69	747712.31	32° 27' 5.256 N	103° 39' 51.444 W
Bilbrey 27 A 1	0.00	5980.01	3390.62	528624.06	747715.36	32° 27' 5.309 N	103° 39' 51.408 W
Bilbrey 28 1	0.00	5952.46	750.20	528596.51	745074.94	32° 27' 5.199 N	103° 40' 22.224 W
Intermediate Radius	0.00	0.00	0.00	522644.05	744324.74	32° 26' 6.345 N	103° 40' 31.407 W
SHL (B33FC 4H)	0.00	0.00	0.00	522644.05	744324.74	32° 26' 6.345 N	103° 40' 31.407 W
Surface Radius	0.00	0.00	0.00	522644.05	744324.74	32° 26' 6.345 N	103° 40' 31.407 W
PBHL (B33FC 4H)	10644.09	7645.15	370.51	530289.20	744695.25	32° 27' 21.971 N	103° 40' 26.533 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5476.81	0.00	0.00	5476.81	0.00	0.00	0.00	0.00	0.00	
3	5726.81	5.00	90.00	5726.49	0.00	10.90	2.00	90.00	0.32	
4	9726.81	5.00	90.00	9711.27	0.00	359.52	0.00	0.00	10.54	
5	9976.81	0.00	0.00	9960.95	0.00	370.43	2.00	180.00	10.86	
6	10076.81	0.00	0.00	10060.95	0.00	370.43	0.00	0.00	10.86	
7	10986.81	91.00	0.00	10633.82	582.96	370.43	10.00	0.00	593.57	
8	12273.85	91.00	0.00	10611.36	1869.80	370.43	0.00	0.00	1879.86	
9	12373.85	90.00	0.00	10610.49	1969.80	370.43	1.00	180.00	1979.81	
10	14173.85	90.00	0.00	10610.49	3769.80	370.43	0.00	0.00	3779.04	
11	14223.85	89.50	0.00	10610.71	3819.80	370.43	1.00	180.00	3829.01	
12	18049.35	89.50	0.00	10644.09	7645.15	370.51	0.00	88.71	7652.73	PBHL (B33FC 4H)

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
815.00	815.00	Rustler	0.00	
1145.00	1145.00	Salado	0.00	
4564.00	4564.00	Base of Salt	0.00	
4734.00	4734.00	Delaware	0.00	
4849.00	4849.00	Bell Canyon	0.00	
5714.00	5714.27	Cherry Canyon	0.00	
6914.00	6918.85	Brushy Canyon	0.00	
8729.00	8740.79	1st BSPG Lime	0.00	
9734.00	9749.62	1st BSPG Sand	0.00	
9974.00	9989.86	2nd BSPG Lime	0.00	
10379.00	10413.98	2nd BSPG Sand	0.00	
10614.00	10825.31	Target Window Top	0.00	



LEAM DRILLING SYSTEMS LLC
2010 East Davis, Conroe, Texas 77301
Phone: 936/756-7577, Fax: 936/756-7595

Plan: Plan #1 (4H/1H OH)
Bilbrey 33 Fed Com
Created By: Brady Deaver
Date: 15/37, June 19 2014
Approved: _____ Date: _____

DEVON ENERGY

Lea County, NM (NAD-83)

Bilbrey 33 Fed Com

4H

1H OH

Plan: Plan #1

Standard Planning Report

19 June, 2014

HOBES OCD

JUN 30 2014

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LEAM Drilling Systems LLC
Planning Report

HOBBS OCD
JUN 30 2014
RECEIVED

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Project:	Lea County, NM (NAD-83)	MD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Site:	Bilbrey 33 Fed Com	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	1H OH		
Design:	Plan #1		

Project	Lea County, NM (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Bilbrey 33 Fed Com		
Site Position:	From: Map	Northing: 522,643.51 usft	Latitude: 32° 26' 6.343 N
		Easting: 744,274.73 usft	Longitude: 103° 40' 31.990 W
Position Uncertainty:	0.00 usft	Slot Radius: 13-3/16"	Grid Convergence: 0.35°

Well	4H, 2nd BS SS		
Well Position	+N/-S 0.54 usft	Northing: 522,644.05 usft	Latitude: 32° 26' 6.345 N
	+E/-W 50.01 usft	Easting: 744,324.74 usft	Longitude: 103° 40' 31.407 W
Position Uncertainty	0.00 usft	Wellhead Elevation: 3,754.10 usft	Ground Level: 3,729.10 usft

Wellbore	1H OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	6/16/2014	7.40	60.28	48,405

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	1.68

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,476.81	0.00	0.00	5,476.81	0.00	0.00	0.00	0.00	0.00	0.00	
5,726.81	5.00	90.00	5,726.49	0.00	10.90	2.00	2.00	0.00	90.00	
9,726.81	5.00	90.00	9,711.27	0.00	359.52	0.00	0.00	0.00	0.00	
9,976.81	0.00	0.00	9,960.95	0.00	370.43	2.00	-2.00	0.00	180.00	
10,076.81	0.00	0.00	10,060.95	0.00	370.43	0.00	0.00	0.00	0.00	
10,986.81	91.00	0.00	10,633.83	582.96	370.43	10.00	10.00	0.00	0.00	
12,273.85	91.00	0.00	10,611.36	1,869.80	370.43	0.00	0.00	0.00	0.00	
12,373.85	90.00	0.00	10,610.49	1,969.80	370.43	1.00	-1.00	0.00	180.00	
14,173.85	90.00	0.00	10,610.49	3,769.80	370.43	0.00	0.00	0.00	0.00	
14,223.85	89.50	0.00	10,610.71	3,819.80	370.43	1.00	-1.00	0.00	180.00	
18,049.35	89.50	0.00	10,644.09	7,645.15	370.51	0.00	0.00	0.00	88.71 PBHL (B33FC 4H)	

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Project:	Lea County, NM (NAD-83)	MD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Site:	Bilbrey 33 Fed Com	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	1H OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Intermediate Radius - Bilbrey 28 1 - Bilbrey 27 1 - Bilbrey 27 A 1 - SHL (B33FC 4H) - Surface Radius									
100.00	0.00	0.00	100.00	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
300.00	0.00	0.00	300.00	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
500.00	0.00	0.00	500.00	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
700.00	0.00	0.00	700.00	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
900.00	0.00	0.00	900.00	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
1,100.00	0.00	0.00	1,100.00	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
1,300.00	0.00	0.00	1,300.00	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
1,500.00	0.00	0.00	1,500.00	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
1,700.00	0.00	0.00	1,700.00	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
1,900.00	0.00	0.00	1,900.00	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
2,100.00	0.00	0.00	2,100.00	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
2,300.00	0.00	0.00	2,300.00	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
2,500.00	0.00	0.00	2,500.00	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
2,700.00	0.00	0.00	2,700.00	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
2,900.00	0.00	0.00	2,900.00	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
3,100.00	0.00	0.00	3,100.00	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
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	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
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	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
3,900.00	0.00	0.00	3,900.00	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
4,100.00	0.00	0.00	4,100.00	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
4,300.00	0.00	0.00	4,300.00	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
4,500.00	0.00	0.00	4,500.00	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
4,700.00	0.00	0.00	4,700.00	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
4,900.00	0.00	0.00	4,900.00	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

LEAM Drilling Systems LLC
Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Project:	Lea County, NM (NAD-83)	MD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Site:	Bilbrey, 33 Fed Com.	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	1H OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,100.00	0.00	0.00	5,100.00	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	
5,300.00	0.00	0.00	5,300.00	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	
5,476.81	0.00	0.00	5,476.81	0.00	0.00	0.00	0.00	0.00	0.00	
Start 2° Nudge										
5,500.00	0.46	90.00	5,500.00	0.00	0.09	0.00	2.00	2.00	0.00	
5,600.00	2.46	90.00	5,599.96	0.00	2.65	0.08	2.00	2.00	0.00	
5,700.00	4.46	90.00	5,699.77	0.00	8.69	0.25	2.00	2.00	0.00	
5,726.81	5.00	90.00	5,726.49	0.00	10.90	0.32	2.00	2.00	0.00	
Hold										
5,800.00	5.00	90.00	5,799.40	0.00	17.28	0.51	0.00	0.00	0.00	
5,900.00	5.00	90.00	5,899.02	0.00	26.00	0.76	0.00	0.00	0.00	
6,000.00	5.00	90.00	5,998.64	0.00	34.71	1.02	0.00	0.00	0.00	
6,100.00	5.00	90.00	6,098.26	0.00	43.43	1.27	0.00	0.00	0.00	
6,200.00	5.00	90.00	6,197.88	0.00	52.14	1.53	0.00	0.00	0.00	
6,300.00	5.00	90.00	6,297.50	0.00	60.86	1.78	0.00	0.00	0.00	
6,400.00	5.00	90.00	6,397.12	0.00	69.57	2.04	0.00	0.00	0.00	
6,500.00	5.00	90.00	6,496.74	0.00	78.29	2.30	0.00	0.00	0.00	
6,600.00	5.00	90.00	6,596.36	0.00	87.00	2.55	0.00	0.00	0.00	
6,700.00	5.00	90.00	6,695.98	0.00	95.72	2.81	0.00	0.00	0.00	
6,800.00	5.00	90.00	6,795.60	0.00	104.44	3.06	0.00	0.00	0.00	
6,900.00	5.00	90.00	6,895.22	0.00	113.15	3.32	0.00	0.00	0.00	
7,000.00	5.00	90.00	6,994.84	0.00	121.87	3.57	0.00	0.00	0.00	
7,100.00	5.00	90.00	7,094.46	0.00	130.58	3.83	0.00	0.00	0.00	
7,200.00	5.00	90.00	7,194.08	0.00	139.30	4.08	0.00	0.00	0.00	
7,300.00	5.00	90.00	7,293.70	0.00	148.01	4.34	0.00	0.00	0.00	
7,400.00	5.00	90.00	7,393.32	0.00	156.73	4.59	0.00	0.00	0.00	
7,500.00	5.00	90.00	7,492.94	0.00	165.45	4.85	0.00	0.00	0.00	
7,600.00	5.00	90.00	7,592.55	0.00	174.16	5.11	0.00	0.00	0.00	
7,700.00	5.00	90.00	7,692.17	0.00	182.88	5.36	0.00	0.00	0.00	
7,800.00	5.00	90.00	7,791.79	0.00	191.59	5.62	0.00	0.00	0.00	
7,900.00	5.00	90.00	7,891.41	0.00	200.31	5.87	0.00	0.00	0.00	
8,000.00	5.00	90.00	7,991.03	0.00	209.02	6.13	0.00	0.00	0.00	
8,100.00	5.00	90.00	8,090.65	0.00	217.74	6.38	0.00	0.00	0.00	
8,200.00	5.00	90.00	8,190.27	0.00	226.45	6.64	0.00	0.00	0.00	
8,300.00	5.00	90.00	8,289.89	0.00	235.17	6.89	0.00	0.00	0.00	
8,400.00	5.00	90.00	8,389.51	0.00	243.89	7.15	0.00	0.00	0.00	
8,500.00	5.00	90.00	8,489.13	0.00	252.60	7.41	0.00	0.00	0.00	
8,600.00	5.00	90.00	8,588.75	0.00	261.32	7.66	0.00	0.00	0.00	
8,700.00	5.00	90.00	8,688.37	0.00	270.03	7.92	0.00	0.00	0.00	
8,800.00	5.00	90.00	8,787.99	0.00	278.75	8.17	0.00	0.00	0.00	
8,900.00	5.00	90.00	8,887.61	0.00	287.46	8.43	0.00	0.00	0.00	
9,000.00	5.00	90.00	8,987.23	0.00	296.18	8.68	0.00	0.00	0.00	
9,100.00	5.00	90.00	9,086.85	0.00	304.89	8.94	0.00	0.00	0.00	
9,200.00	5.00	90.00	9,186.47	0.00	313.61	9.19	0.00	0.00	0.00	
9,300.00	5.00	90.00	9,286.09	0.00	322.33	9.45	0.00	0.00	0.00	
9,400.00	5.00	90.00	9,385.71	0.00	331.04	9.71	0.00	0.00	0.00	
9,500.00	5.00	90.00	9,485.32	0.00	339.76	9.96	0.00	0.00	0.00	
9,600.00	5.00	90.00	9,584.94	0.00	348.47	10.22	0.00	0.00	0.00	
9,700.00	5.00	90.00	9,684.56	0.00	357.19	10.47	0.00	0.00	0.00	
9,726.81	5.00	90.00	9,711.27	0.00	359.52	10.54	0.00	0.00	0.00	

LEAM Drilling Systems LLC
Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Project:	Lea County, NM (NAD-83)	MD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Site:	Bilbrey 33 Fed Com	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	1H OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
Start 2° Drop										
9,800.00	3.54	90.00	9,784.26	0.00	364.97	10.70	2.00	-2.00	0.00	
9,900.00	1.54	90.00	9,884.15	0.00	369.40	10.83	2.00	-2.00	0.00	
9,976.81	0.00	0.00	9,960.95	0.00	370.43	10.86	2.00	-2.00	0.00	
Hold										
10,000.00	0.00	0.00	9,984.14	0.00	370.43	10.86	0.00	0.00	0.00	
10,076.81	0.00	0.00	10,060.95	0.00	370.43	10.86	0.00	0.00	0.00	
KOP 10° DLS										
10,100.00	2.32	0.00	10,084.14	0.47	370.43	11.33	10.00	10.00	0.00	
10,150.00	7.32	0.00	10,133.95	4.67	370.43	15.53	10.00	10.00	0.00	
10,200.00	12.32	0.00	10,183.20	13.19	370.43	24.05	10.00	10.00	0.00	
10,250.00	17.32	0.00	10,231.52	25.98	370.43	36.83	10.00	10.00	0.00	
10,300.00	22.32	0.00	10,278.54	42.92	370.43	53.77	10.00	10.00	0.00	
10,350.00	27.32	0.00	10,323.91	63.90	370.43	74.74	10.00	10.00	0.00	
10,400.00	32.32	0.00	10,367.28	88.76	370.43	99.58	10.00	10.00	0.00	
10,450.00	37.32	0.00	10,408.31	117.30	370.43	128.11	10.00	10.00	0.00	
10,500.00	42.32	0.00	10,446.70	149.31	370.43	160.10	10.00	10.00	0.00	
10,550.00	47.32	0.00	10,482.16	184.54	370.43	195.32	10.00	10.00	0.00	
10,600.00	52.32	0.00	10,514.41	222.73	370.43	233.49	10.00	10.00	0.00	
10,650.00	57.32	0.00	10,543.21	263.58	370.43	274.33	10.00	10.00	0.00	
10,700.00	62.32	0.00	10,568.34	306.79	370.43	317.52	10.00	10.00	0.00	
10,750.00	67.32	0.00	10,589.60	352.03	370.43	362.73	10.00	10.00	0.00	
10,800.00	72.32	0.00	10,606.85	398.94	370.43	409.63	10.00	10.00	0.00	
10,850.00	77.32	0.00	10,619.94	447.18	370.43	457.85	10.00	10.00	0.00	
10,900.00	82.32	0.00	10,628.77	496.38	370.43	507.02	10.00	10.00	0.00	
10,950.00	87.32	0.00	10,633.29	546.16	370.43	556.78	10.00	10.00	0.00	
10,986.81	91.00	0.00	10,633.83	582.96	370.43	593.57	10.00	10.00	0.00	
LP - Hold 91° INC										
11,000.00	91.00	0.00	10,633.60	596.15	370.43	606.75	0.00	0.00	0.00	
11,100.00	91.00	0.00	10,631.85	696.13	370.43	706.69	0.00	0.00	0.00	
11,200.00	91.00	0.00	10,630.10	796.11	370.43	806.63	0.00	0.00	0.00	
11,300.00	91.00	0.00	10,628.36	896.10	370.43	906.57	0.00	0.00	0.00	
11,400.00	91.00	0.00	10,626.61	996.08	370.43	1,006.52	0.00	0.00	0.00	
11,500.00	91.00	0.00	10,624.87	1,096.07	370.43	1,106.46	0.00	0.00	0.00	
11,600.00	91.00	0.00	10,623.12	1,196.05	370.43	1,206.40	0.00	0.00	0.00	
11,700.00	91.00	0.00	10,621.38	1,296.04	370.43	1,306.34	0.00	0.00	0.00	
11,800.00	91.00	0.00	10,619.63	1,396.02	370.43	1,406.28	0.00	0.00	0.00	
11,900.00	91.00	0.00	10,617.89	1,496.01	370.43	1,506.23	0.00	0.00	0.00	
12,000.00	91.00	0.00	10,616.14	1,595.99	370.43	1,606.17	0.00	0.00	0.00	
12,100.00	91.00	0.00	10,614.40	1,695.98	370.43	1,706.11	0.00	0.00	0.00	
12,200.00	91.00	0.00	10,612.65	1,795.96	370.43	1,806.05	0.00	0.00	0.00	
12,273.85	91.00	0.00	10,611.36	1,869.80	370.43	1,879.86	0.00	0.00	0.00	
Drop to 90° INC										
12,300.00	90.74	0.00	10,610.97	1,895.95	370.43	1,905.99	1.00	-1.00	0.00	
12,373.85	90.00	0.00	10,610.49	1,969.80	370.43	1,979.81	1.00	-1.00	0.00	
Hold										
12,400.00	90.00	0.00	10,610.49	1,995.95	370.43	2,005.95	0.00	0.00	0.00	
12,500.00	90.00	0.00	10,610.49	2,095.95	370.43	2,105.91	0.00	0.00	0.00	
12,600.00	90.00	0.00	10,610.49	2,195.95	370.43	2,205.86	0.00	0.00	0.00	
12,700.00	90.00	0.00	10,610.49	2,295.95	370.43	2,305.82	0.00	0.00	0.00	
12,800.00	90.00	0.00	10,610.49	2,395.95	370.43	2,405.78	0.00	0.00	0.00	

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Project:	Lea County, NM (NAD-83)	MD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Site:	Bilbrey 33 Fed Com	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	1H OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,900.00	90.00	0.00	10,610.49	2,495.95	370.43	2,505.73	0.00	0.00	0.00
13,000.00	90.00	0.00	10,610.49	2,595.95	370.43	2,605.69	0.00	0.00	0.00
13,100.00	90.00	0.00	10,610.49	2,695.95	370.43	2,705.65	0.00	0.00	0.00
13,200.00	90.00	0.00	10,610.49	2,795.95	370.43	2,805.60	0.00	0.00	0.00
13,300.00	90.00	0.00	10,610.49	2,895.95	370.43	2,905.56	0.00	0.00	0.00
13,400.00	90.00	0.00	10,610.49	2,995.95	370.43	3,005.52	0.00	0.00	0.00
13,500.00	90.00	0.00	10,610.49	3,095.95	370.43	3,105.48	0.00	0.00	0.00
13,600.00	90.00	0.00	10,610.49	3,195.95	370.43	3,205.43	0.00	0.00	0.00
13,700.00	90.00	0.00	10,610.49	3,295.95	370.43	3,305.39	0.00	0.00	0.00
13,800.00	90.00	0.00	10,610.49	3,395.95	370.43	3,405.35	0.00	0.00	0.00
13,900.00	90.00	0.00	10,610.49	3,495.95	370.43	3,505.30	0.00	0.00	0.00
14,000.00	90.00	0.00	10,610.49	3,595.95	370.43	3,605.26	0.00	0.00	0.00
14,100.00	90.00	0.00	10,610.49	3,695.95	370.43	3,705.22	0.00	0.00	0.00
14,173.85	90.00	0.00	10,610.49	3,769.80	370.43	3,779.04	0.00	0.00	0.00
Drop to 89.5° INC									
14,200.00	89.74	0.00	10,610.55	3,795.95	370.43	3,805.17	1.00	-1.00	0.00
14,223.85	89.50	0.00	10,610.71	3,819.80	370.43	3,829.01	1.00	-1.00	0.00
Hold									
14,300.00	89.50	0.00	10,611.37	3,895.94	370.43	3,905.13	0.00	0.00	0.00
14,400.00	89.50	0.00	10,612.25	3,995.94	370.43	4,005.08	0.00	0.00	0.00
14,500.00	89.50	0.00	10,613.12	4,095.94	370.43	4,105.03	0.00	0.00	0.00
14,600.00	89.50	0.00	10,613.99	4,195.93	370.43	4,204.99	0.00	0.00	0.00
14,700.00	89.50	0.00	10,614.86	4,295.93	370.43	4,304.94	0.00	0.00	0.00
14,800.00	89.50	0.00	10,615.74	4,395.92	370.43	4,404.89	0.00	0.00	0.00
14,900.00	89.50	0.00	10,616.61	4,495.92	370.43	4,504.85	0.00	0.00	0.00
15,000.00	89.50	0.00	10,617.48	4,595.92	370.43	4,604.80	0.00	0.00	0.00
15,100.00	89.50	0.00	10,618.35	4,695.91	370.43	4,704.75	0.00	0.00	0.00
15,200.00	89.50	0.00	10,619.23	4,795.91	370.43	4,804.71	0.00	0.00	0.00
15,300.00	89.50	0.00	10,620.10	4,895.90	370.43	4,904.66	0.00	0.00	0.00
15,400.00	89.50	0.00	10,620.97	4,995.90	370.43	5,004.61	0.00	0.00	0.00
15,500.00	89.50	0.00	10,621.84	5,095.90	370.44	5,104.57	0.00	0.00	0.00
15,600.00	89.50	0.00	10,622.72	5,195.89	370.44	5,204.52	0.00	0.00	0.00
15,700.00	89.50	0.00	10,623.59	5,295.89	370.44	5,304.47	0.00	0.00	0.00
15,800.00	89.50	0.00	10,624.46	5,395.89	370.44	5,404.43	0.00	0.00	0.00
15,900.00	89.50	0.00	10,625.34	5,495.88	370.44	5,504.38	0.00	0.00	0.00
16,000.00	89.50	0.00	10,626.21	5,595.88	370.44	5,604.33	0.00	0.00	0.00
16,100.00	89.50	0.00	10,627.08	5,695.87	370.45	5,704.29	0.00	0.00	0.00
16,200.00	89.50	0.00	10,627.95	5,795.87	370.45	5,804.24	0.00	0.00	0.00
16,300.00	89.50	0.00	10,628.83	5,895.87	370.45	5,904.19	0.00	0.00	0.00
16,400.00	89.50	0.00	10,629.70	5,995.86	370.45	6,004.15	0.00	0.00	0.00
16,500.00	89.50	0.00	10,630.57	6,095.86	370.46	6,104.10	0.00	0.00	0.00
16,600.00	89.50	0.00	10,631.44	6,195.86	370.46	6,204.05	0.00	0.00	0.00
16,700.00	89.50	0.00	10,632.32	6,295.85	370.46	6,304.01	0.00	0.00	0.00
16,800.00	89.50	0.00	10,633.19	6,395.85	370.46	6,403.96	0.00	0.00	0.00
16,900.00	89.50	0.00	10,634.06	6,495.84	370.47	6,503.91	0.00	0.00	0.00
17,000.00	89.50	0.00	10,634.93	6,595.84	370.47	6,603.87	0.00	0.00	0.00
17,100.00	89.50	0.00	10,635.81	6,695.84	370.47	6,703.82	0.00	0.00	0.00
17,200.00	89.50	0.00	10,636.68	6,795.83	370.48	6,803.77	0.00	0.00	0.00
17,300.00	89.50	0.00	10,637.55	6,895.83	370.48	6,903.73	0.00	0.00	0.00
17,400.00	89.50	0.00	10,638.42	6,995.82	370.48	7,003.68	0.00	0.00	0.00
17,500.00	89.50	0.00	10,639.30	7,095.82	370.49	7,103.63	0.00	0.00	0.00
17,600.00	89.50	0.00	10,640.17	7,195.82	370.49	7,203.59	0.00	0.00	0.00

LEAM Drilling Systems LLC
Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Project:	Lea County, NM (NAD-83)	MD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Site:	Bilbrey 33 Fed Com	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	1H OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,700.00	89.50	0.00	10,641.04	7,295.81	370.50	7,303.54	0.00	0.00	0.00
17,800.00	89.50	0.00	10,641.91	7,395.81	370.50	7,403.49	0.00	0.00	0.00
17,900.00	89.50	0.00	10,642.79	7,495.81	370.50	7,503.45	0.00	0.00	0.00
18,000.00	89.50	0.00	10,643.66	7,595.80	370.51	7,603.40	0.00	0.00	0.00
18,049.35	89.50	0.00	10,644.09	7,645.15	370.51	7,652.73	0.00	0.00	0.00
TD - 18049.35' MD - 10644.09' TVD - PBHL (B33FC 4H)									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Intermediate Radius	0.00	0.00	0.00	0.00	0.00	522,644.05	744,324.74	32° 26' 6.345 N	103° 40' 31.407 W
- plan hits target center									
- Circle (radius 8.19)									
Bilbrey 28 1	0.00	0.00	0.00	5,952.46	750.20	528,596.51	745,074.94	32° 27' 5.199 N	103° 40' 22.224 W
- plan misses target center by 5999.55usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Circle (radius 352.00)									
Bilbrey 27 1	0.00	0.00	0.00	5,974.64	3,387.57	528,618.69	747,712.31	32° 27' 5.256 N	103° 39' 51.444 W
- plan misses target center by 6868.18usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Circle (radius 255.00)									
Bilbrey 27 A 1	0.00	0.00	0.00	5,980.01	3,390.62	528,624.06	747,715.36	32° 27' 5.309 N	103° 39' 51.408 W
- plan misses target center by 6874.36usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Circle (radius 272.00)									
SHL (B33FC 4H)	0.00	0.00	0.00	0.00	0.00	522,644.05	744,324.74	32° 26' 6.345 N	103° 40' 31.407 W
- plan hits target center									
- Point									
Surface Radius	0.00	0.00	0.00	0.00	0.00	522,644.05	744,324.74	32° 26' 6.345 N	103° 40' 31.407 W
- plan hits target center									
- Circle (radius 42.38)									
PBHL (B33FC 4H)	0.00	0.00	10,644.09	7,645.15	370.51	530,289.20	744,695.25	32° 27' 21.971 N	103° 40' 26.533 W
- plan hits target center									
- Point									

LEAM Drilling Systems LLC

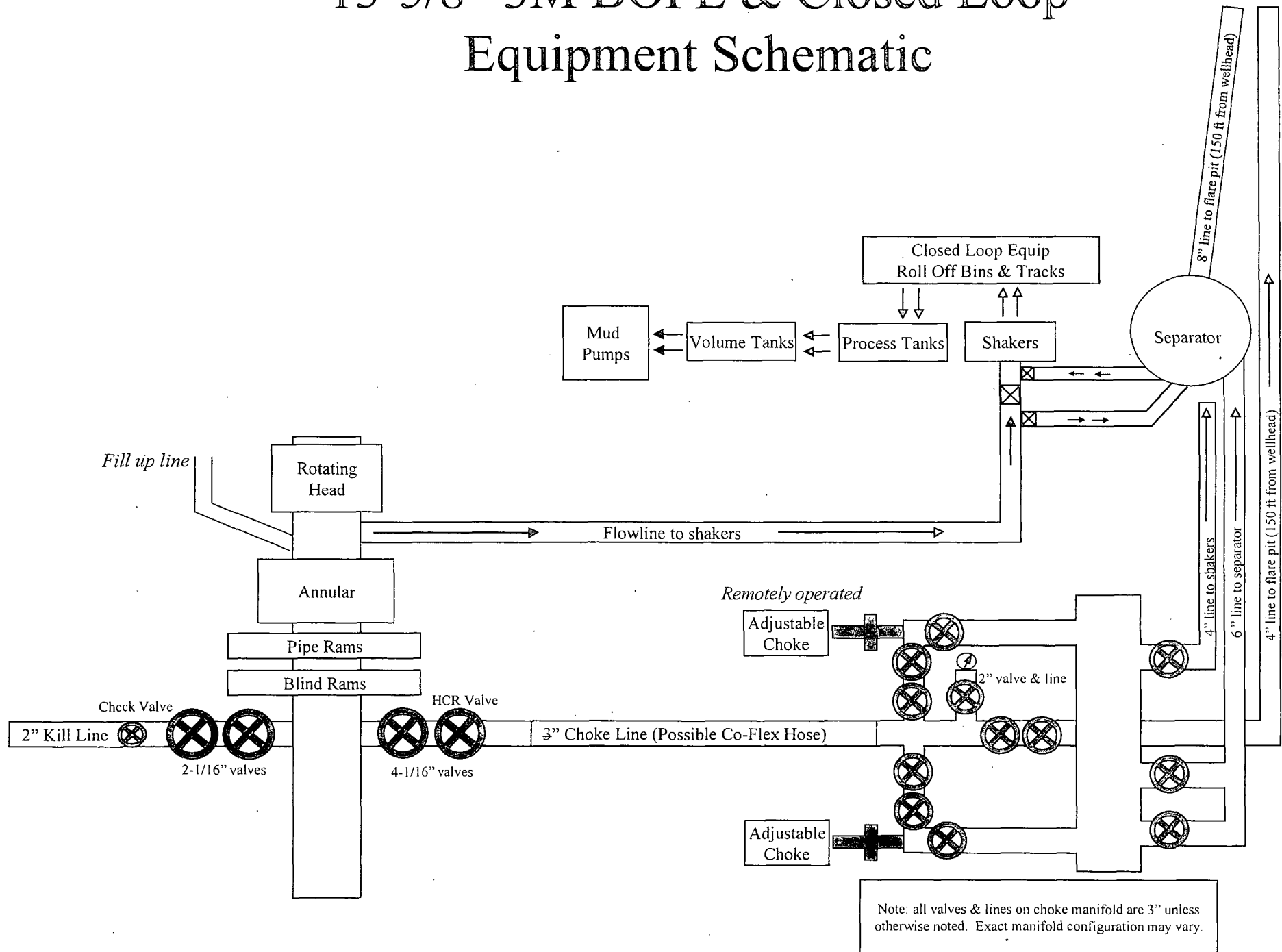
Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Project:	Lea County, NM (NAD-83)	MD Reference:	H&P 394: 3729.1' GL + 25' RKB @ 3754.10usft
Site:	Bilbrey 33 Fed Com	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	1H OH		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
815.00	815.00	Rustler		0.00		
1,145.00	1,145.00	Salado		0.00		
4,564.00	4,564.00	Base of Salt		0.00		
4,734.00	4,734.00	Delaware		0.00		
4,849.00	4,849.00	Bell Canyon		0.00		
5,714.27	5,714.00	Cherry Canyon		0.00		
6,918.85	6,914.00	Brushy Canyon		0.00		
8,740.79	8,729.00	1st BSPG Lime		0.00		
9,749.62	9,734.00	1st BSPG Sand		0.00		
9,989.86	9,974.00	2nd BSPG Lime		0.00		
10,413.98	10,379.00	2nd BSPG Sand		0.00		
10,825.31	10,614.00	Target Window Top		0.00		

Plan-Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
5,476.81	5,476.81	0.00	0.00	Start 2° Nudge	
5,726.81	5,726.49	0.00	10.90	Hold	
9,726.81	9,711.27	0.00	359.52	Start 2° Drop	
9,976.81	9,960.95	0.00	370.43	Hold	
10,076.81	10,060.95	0.00	370.43	KOP 10° DLS	
10,986.81	10,633.83	582.96	370.43	LP - Hold 91° INC	
12,273.85	10,611.36	1,869.80	370.43	Drop to 90° INC	
12,373.85	10,610.49	1,969.80	370.43	Hold	
14,173.85	10,610.49	3,769.80	370.43	Drop to 89.5° INC	
14,223.85	10,610.71	3,819.80	370.43	Hold	
18,049.35	10,644.09	7,645.15	370.51	TD - 18049.35' MD - 10644.09' TVD	

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



PECOS DISTRICT
CONDITIONS OF APPROVAL

HOBBS OCD
JUN 30 2014

RECEIVED

OPERATOR'S NAME:	DEVON ENERGY
LEASE NO.:	NM58938
WELL NAME & NO.:	4H-Bilbrey 33 Fed Com
SURFACE HOLE FOOTAGE:	2600' FSL & 1300' FEL
BOTTOM HOLE FOOTAGE	330' FNL & 660' FEL (Sec. 28)
LOCATION:	Section 33, T. 21 S., R 32 E., NMPM
COUNTY:	Lea County, New Mexico
API:	30-025-41807

The original COAs still stand with the following drilling modifications:

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ **Lea County**

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. **Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Secretary's Potash

Possibility of water flows in the Salado, Castile, and Delaware.

Possibility of lost circulation in the Red Bed, Rustler, Delaware, and Bone Spring.

High pressures may be encountered within the 2nd Bone Spring.

1. The 13-3/8 inch surface casing shall be set at approximately 900 feet (in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
- ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

Option #1: Single stage

- ☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

Option #2: Multi-stage

Operator has proposed DV tool at depth of 6500'. Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.

- a. First stage to DV tool:
 - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve approved top of cement on the next stage.

b. Second stage above DV tool:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M) psi.**
 - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **5000 (5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
- a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock with a corresponding chart (i.e. two hour clock-two hour chart, one hour clock-one hour chart).
 - d. The results of the test shall be reported to the appropriate BLM office.
 - e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
 - f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

JAM 062514