

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) 334-6170

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Form C-101
Revised October 25, 2012

**Energy Minerals and Natural Resources****Oil Conservation Division**

1220 South St. Francis Dr.

Santa Fe, NM 87505

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address Chevron USA Inc. 15 Smith Road Midland, TX 79705		2. OGRID Number 4323
3. Property Name WEST SHUGART 2 19 30 STATE		4. Well No. 4H
5. Property Code 39552	6. API Number 30-015-40843	

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
D	2	19 S	30 E		400'	N	150'	W	EDDY

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
A	2	19 S	30 E		400'	N	350'	E	EDDY

9. Pool Information

BENSON; BONE SPRING (5200)

Additional Well Information

11. Work Type N	12. Well Type O	13. Cable/Rotary C	14. Lease Type S	15. Ground Level Elevation 3468'
16. Multiple N	17. Proposed Depth 13104'	18. Formation BONE SPRING	19. Contractor TBD	20. Spud Date ASAP
Depth to Ground water NO RECORDS FOUND		Distance from nearest fresh water well NO RECORDS FOUND		Distance to nearest surface water 1.822 Miles SSW

21. Proposed Casing and Cement Program (See attached casing program)

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC

Casing/Cement Program: Additional Comments

NMOC D's forms C-102, C-144(CLEZ) pit permit, proposed casing, directional planning report is attached. There are no known high levels of H2S in this area. However, monitoring of H2S and well readiness will be utilized in the drilling of this well.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
DOUBLE RAM	5000	5000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐, if applicable.

Signature:

Printed name: Bryan Arrant (Agent for Chevron)

Title: Regulatory Specialist II

E-mail Address: bryan.arrant@chk.com

Date: 11/20/2012

Phone: 405.935.3782

OIL CONSERVATION DIVISION

Approved By:

Title:

Approved Date: 12/21/2012

Expiration Date: 11/21/2014

Conditions of Approval Attached

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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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-40843	² Pool Code (5200)	³ Pool Name BENSON; BONE SPRING
⁴ Property Code 39552	⁵ Property Name WEST SHUGART 2 19 30 STATE	
⁷ OGRID No. 4323	⁸ Operator Name CHEVRON USA, INC.	⁶ Well Number 4H
		⁹ Elevation 3468'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	2	19S	30E		400'	NORTH	150'	WEST	EDDY

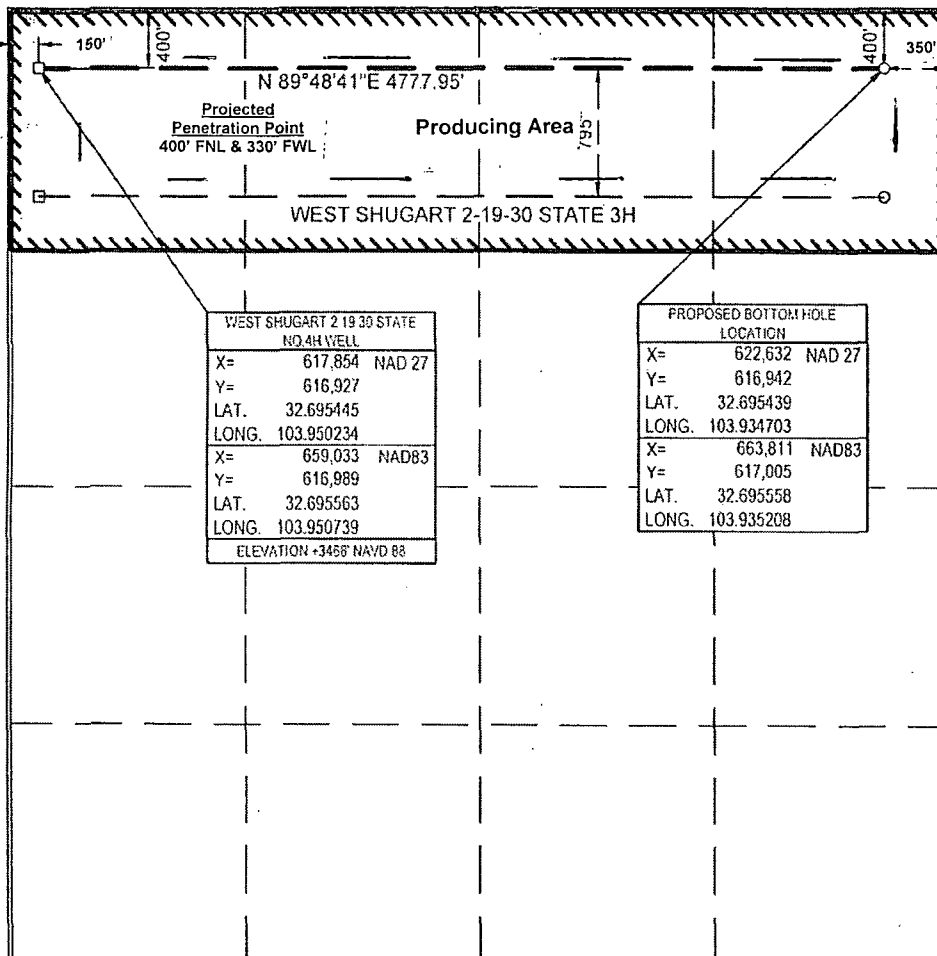
Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	2	19S	30E		400'	NORTH	350'	EAST	EDDY

¹² Dedicated Acres 160	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.

Project Area



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 a 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.

Bryan Arrant 11/20/2012
Signature Date
Bryan Arrant (Agent)

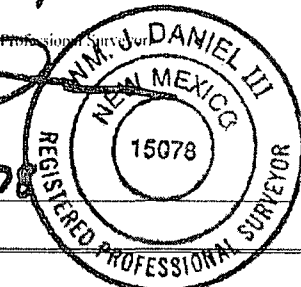
Printed Name
bryan.arrant@chk.com
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Nov 19, 2012
Date of Survey

Signature and Seal of Professional Surveyor
[Signature]
Certificate Number
#15078



West Shugart
4H

Type	Hole Size	Casing Size	Casing Weight	Setting Depth	Sacks of Cement	Estimated TOC
Surface	17.5	13.375	48	600	635	0
Intermediate	12.25	9.625	40	1850	410	0
Intermediate	8.75	7	29	8802	385	0
Production Liner	6.125	4.5	13.5	13104	Packers (no cement)	N/A

NOTE:

PLEASE BE ADVISED, THAT WHILE REASONABLE EFFORTS ARE MADE TO LOCATE AND VERIFY PIPELINES AND ANOMALIES USING OUR STANDARD PIPELINE LOCATING EQUIPMENT, IT IS IMPOSSIBLE TO BE 100% EFFECTIVE. AS SUCH, WE ADVISE USING CAUTION WHEN PERFORMING WORK AS THERE IS A POSSIBILITY THAT PIPELINES AND OTHER HAZARDS, SUCH AS FIBER OPTIC CABLES, PVC PIPELINES, ETC. MAY EXIST UNDETECTED ON SITE.

MANY STATES MAINTAIN INFORMATION CENTERS THAT ESTABLISH LINKS BETWEEN THOSE WHO DIG (EXCAVATORS) AND THOSE WHO OWN AND OPERATE UNDERGROUND FACILITIES (OPERATORS). IT IS ADVISABLE AND IN MOST STATES, LAW, FOR THE CONTRACTOR TO CONTACT THE CENTER FOR ASSISTANCE IN LOCATING AND MARKING UNDERGROUND UTILITIES. NEW MEXICO ONE CALL, <http://www.nmonecall.org/>.

DISCLAIMER: AT THIS TIME, FENSTERMAKER & ASSOCIATES, INC. HAS NOT PERFORMED NOR WAS ASKED TO PERFORM ANY TYPE OF ENGINEERING, HYDROLOGICAL MODELING, FLOOD PLAIN, OR "NO RISE" CERTIFICATION ANALYSES, INCLUDING BUT NOT LIMITED TO DETERMINING WHETHER THE PROJECT WILL IMPACT FLOOD HAZARDS IN CONNECTION WITH FEDERAL/FEMA, STATE, AND/OR LOCAL LAWS, ORDINANCES AND REGULATIONS. ACCORDINGLY, FENSTERMAKER MAKES NO WARRANTY OR REPRESENTATION OF ANY KIND AS TO THE FOREGOING ISSUES, AND PERSONS OR ENTITIES USING THIS INFORMATION SHALL DO SO AT THEIR OWN RISK.

NW ARCH. AREA CRN.	NE ARCH. AREA CRN.	SE ARCH. AREA CRN.	SW ARCH. AREA CRN.	NW PAD CRN.
X= 617,578 NAD 27 Y= 617,225	X= 618,178 NAD 27 Y= 617,228	X= 618,180 NAD 27 Y= 616,628	X= 617,580 NAD 27 Y= 616,625	X= 617,728 NAD 27 Y= 617,091
ELEVATION +3456' NAVD 88	ELEVATION +3454' NAVD 88	ELEVATION +3461' NAVD 88	ELEVATION +3478' NAVD 88	ELEVATION +3461' NAVD 88

Bureau of Land
Management

Sec. 34

**PROPOSED
ARCHEOLOGICAL AREA
±5.99 Acres**

NE PAD CRN.	SE PAD CRN.	SW PAD CRN.
X= 618,028 NAD 27 Y= 617,092	X= 618,030 NAD 27 Y= 616,762	X= 617,730 NAD 27 Y= 616,761
ELEVATION +3456' NAVD 88	ELEVATION +3468' NAVD 88	ELEVATION +3473' NAVD 88

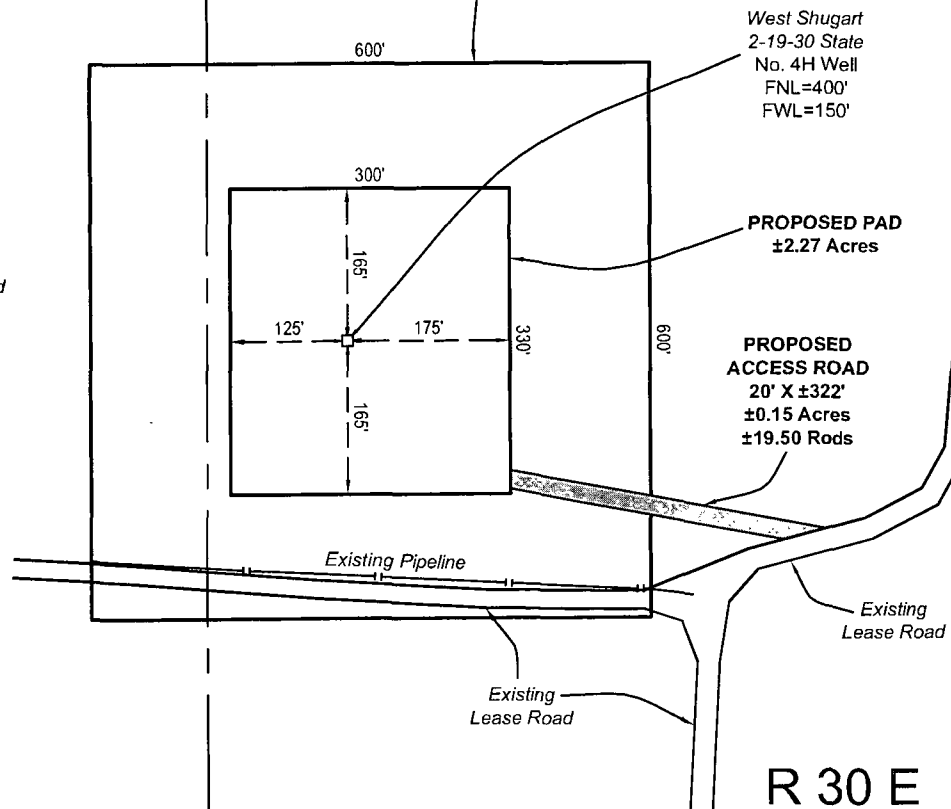
WEST SHUGART 2-19-30 STATE NO. 4H WELL
X= 617,854 NAD 27 Y= 616,927 LAT. 32.695445 LONG. 103.950234
X= 659,033 NAD83 Y= 616,989 LAT. 32.695563 LONG. 103.950739
ELEVATION +3468' NAVD 88

Bureau of Land
Management

Sec. 3

FOR THE EXCLUSIVE USE OF
CHEVRON USA, INC.

I, WM. J. Daniel III, Registered Professional
Land Surveyor, do hereby state this plat is true
and correct to the best of my knowledge.



**T
19
S**

State of New Mexico

Sec. 2

R 30 E

CHEVRON USA, INC.

**PROPOSED PAD & ACCESS ROAD
WEST SHUGART 2-19-30 STATE NO. 4H WELL
SECTION 2, T19S-R30E
EDDY COUNTY, NEW MEXICO**

DRAWN BY: BMO

REVISIONS

PROJ. MGR.: DBM

No.

DATE:

REVISED BY:

DATE: 11/08/2012

No.

DATE:

REVISED BY:

FILENAME: T:\2012\2127843\DWG\West Shugart 2-19-30 STATE 4H SUP.dwg

LEGEND

- ☐ Proposed Well
- Section Line
- Existing Pipeline
- Lease Road



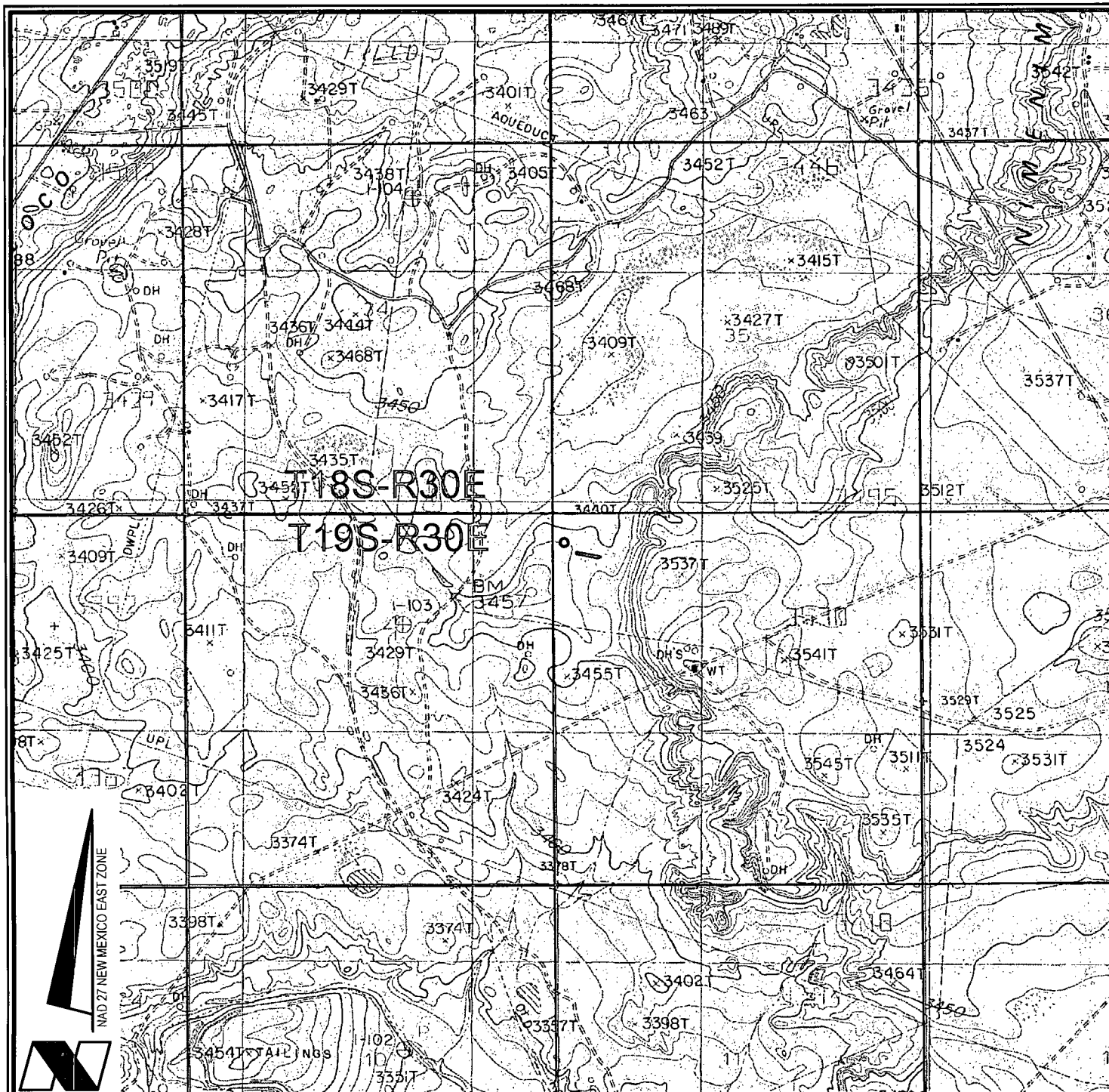
WM. J. Daniel III
Registration No. 15078

Scale: 1"=200'

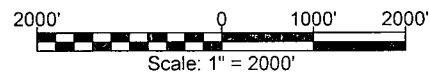
200' 0 100' 200'



135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com



VICINITY MAP



CHEVRON USA, INC.

WEST SHUGART 2-19-30 STATE NO. 4H WELL
 LOCATED 400' FNL AND 150' FWL
 SECTION 2, T19S-R30E
 EDDY COUNTY, NEW MEXICO



Lafayette New Orleans Houston
 135 Regency Sq. Lafayette, LA 70508
 Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

DRAWN BY: BMO

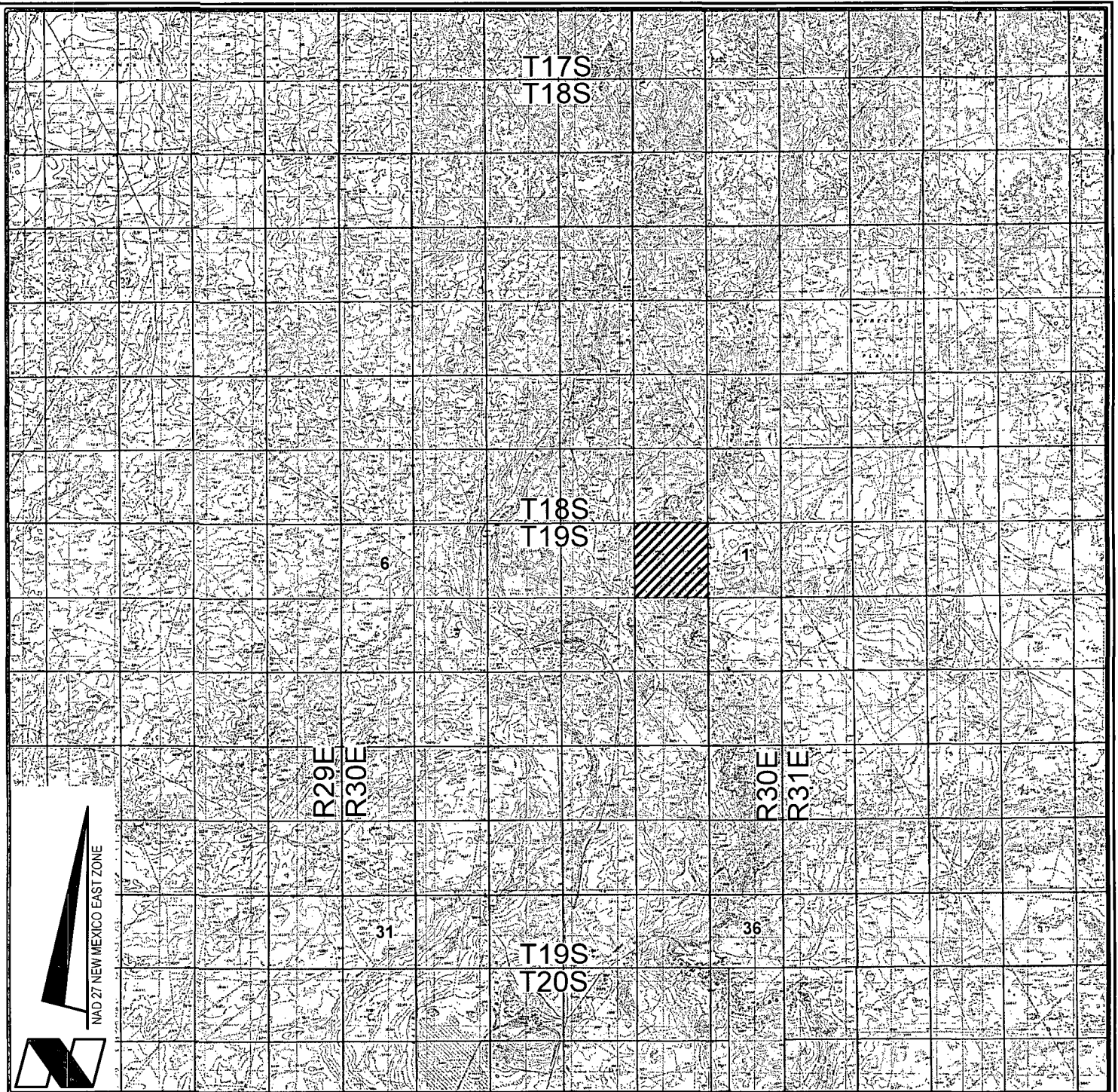
REVISED:

DATE: 11/08/2012

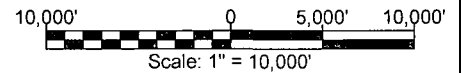
PROJ. MGR.: DBM

SHEET 1 OF 3 SHEETS

FILENAME: T:\2012\2127843\DWG\West Shugart 2-19-30 STATE 4H APD.dwg



VICINITY MAP



CHEVRON USA, INC.
WEST SHUGART 2-19-30 STATE NO. 4H WELL
 LOCATED 400' FNL AND 150' FWL
 SECTION 2, T19S-R30E
 EDDY COUNTY, NEW MEXICO



Lafayette New Orleans Houston
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DRAWN BY: BMO

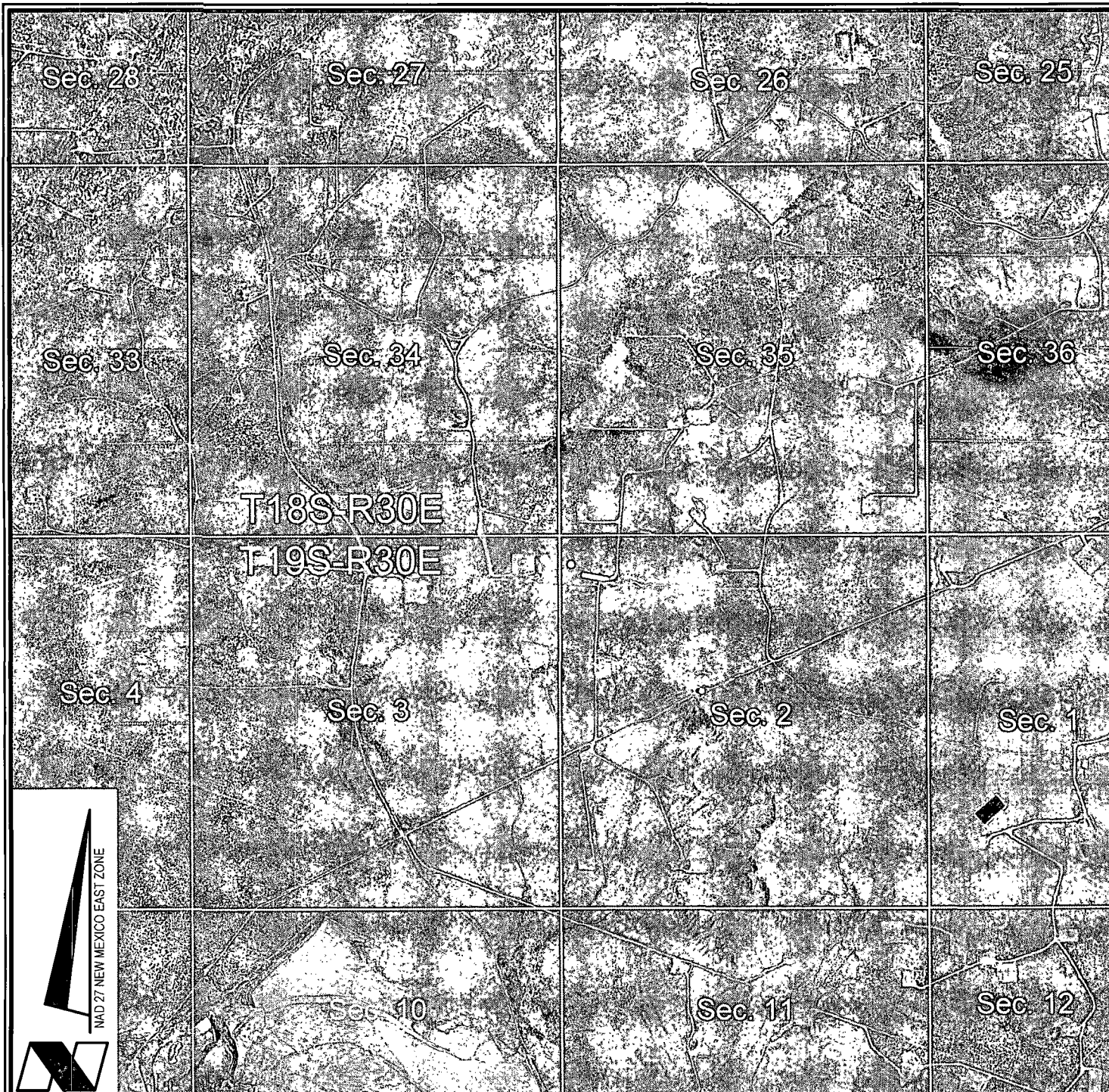
REVISED:

DATE: 11/08/2012

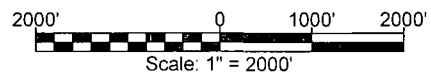
PROJ. MGR.: DBM

SHEET 2 OF 3 SHEETS

FILENAME: T:\2012\2127843\DWG\West Shugart 2-19-30 STATE 4H APD.dwg



VICINITY MAP



-  = FEDERAL LAND
-  = FEE LAND
-  = STATE LAND

CHEVRON USA, INC.

WEST SHUGART 2-19-30 STATE NO. 4H WELL
 LOCATED 400' FNL AND 150' FWL
 SECTION 2, T19S-R30E
 EDDY COUNTY, NEW MEXICO



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DRAWN BY: BMO

REVISED:

DATE: 11/08/2012

PROJ. MGR.: DBM

SHEET 3 OF 3 SHEETS

FILENAME: T:\2012\2127843\DWG\West Shugart 2-19-30 STATE 4H APD.dwg

Permian District

**NM - Bone Spring Sand Project
West Shugart 2-19-30 State 4H
Well #1**

Wellbore #1

Plan: Plat- 11/12/12

Standard Planning Report

19 November, 2012

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Site West Shugart 2-19-30 State 4H
Company:	Permian District	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Project:	NM - Bone Spring Sand Project	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	West Shugart 2-19-30 State 4H	North Reference:	Grid
Well:	Well #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plat- 11/12/12		

Project	NM - Bone Spring Sand Project		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	West Shugart 2-19-30 State 4H
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Site Position:		Northing:	616,927.00 usft	Latitude:	32.695446
From:	Map	Easting:	617,854.00 usft	Longitude:	-103.950234
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.21 °

Well	Well #1				
Well Position	+N/-S	0.00 ft	Northing:	616,927.00 usft	Latitude: 32.695446
	+E/-W	0.00 ft	Easting:	617,854.00 usft	Longitude: -103.950234
Position Uncertainty	0.00 ft		Wellhead Elevation:		Ground Level: 0.00 ft

Wellbore	Wellbore #1
-----------------	-------------

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/16/2012	7.62	60.55	48,784

Design	Plat- 11/12/12
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Audit Notes:	
Version:	Phase: PROTOTYPE Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	89.82

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	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	
8,053.03	0.00	0.00	8,053.03	0.00	0.00	0.00	0.00	0.00	0.00	
8,802.20	89.90	89.82	8,530.49	1.50	476.63	12.00	12.00	0.00	89.82	
13,103.60	89.90	89.82	8,538.00	15.00	4,778.01	0.00	0.00	0.00	0.00	WS 2-19-30 4H- Bt

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Site West Shugart 2-19-30 State 4H
Company:	Permian District	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Project:	NM - Bone Spring Sand Project	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	West Shugart 2-19-30 State 4H	North Reference:	Grid
Well:	Well #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plat: 11/12/12		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
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
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

Chesapeake Operating

Planning Report

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Company:	Permian District	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Project:	NM - Bone Spring Sand Project	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	West Shugart 2-19-30 State 4H	North Reference:	Grid
Well:	Well #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plat- 11/12/12		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	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
5,600.00	0.00	0.00	5,600.00	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
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,053.03	0.00	0.00	8,053.03	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	5.64	89.82	8,099.92	0.01	2.31	2.31	12.00	12.00	0.00
8,200.00	17.64	89.82	8,197.69	0.07	22.44	22.44	12.00	12.00	0.00
8,300.00	29.64	89.82	8,289.13	0.20	62.46	62.46	12.00	12.00	0.00
8,400.00	41.64	89.82	8,370.26	0.38	120.62	120.62	12.00	12.00	0.00
8,500.00	53.64	89.82	8,437.52	0.61	194.37	194.37	12.00	12.00	0.00
8,600.00	65.64	89.82	8,487.97	0.88	280.50	280.50	12.00	12.00	0.00
8,700.00	77.64	89.82	8,519.42	1.18	375.23	375.23	12.00	12.00	0.00
8,800.00	89.64	89.82	8,530.48	1.49	474.43	474.44	12.00	12.00	0.00
8,802.20	89.90	89.82	8,530.49	1.50	476.63	476.63	12.00	12.00	0.00
8,900.00	89.90	89.82	8,530.66	1.80	574.43	574.44	0.00	0.00	0.00
9,000.00	89.90	89.82	8,530.84	2.12	674.43	674.44	0.00	0.00	0.00
9,100.00	89.90	89.82	8,531.01	2.43	774.43	774.44	0.00	0.00	0.00
9,200.00	89.90	89.82	8,531.19	2.75	874.43	874.44	0.00	0.00	0.00
9,300.00	89.90	89.82	8,531.36	3.06	974.43	974.44	0.00	0.00	0.00
9,400.00	89.90	89.82	8,531.54	3.37	1,074.43	1,074.44	0.00	0.00	0.00
9,500.00	89.90	89.82	8,531.71	3.69	1,174.43	1,174.44	0.00	0.00	0.00
9,600.00	89.90	89.82	8,531.89	4.00	1,274.43	1,274.44	0.00	0.00	0.00
9,700.00	89.90	89.82	8,532.06	4.31	1,374.43	1,374.44	0.00	0.00	0.00
9,800.00	89.90	89.82	8,532.23	4.63	1,474.43	1,474.44	0.00	0.00	0.00
9,900.00	89.90	89.82	8,532.41	4.94	1,574.43	1,574.44	0.00	0.00	0.00
10,000.00	89.90	89.82	8,532.58	5.26	1,674.43	1,674.43	0.00	0.00	0.00
10,100.00	89.90	89.82	8,532.76	5.57	1,774.43	1,774.43	0.00	0.00	0.00
10,200.00	89.90	89.82	8,532.93	5.88	1,874.43	1,874.43	0.00	0.00	0.00
10,300.00	89.90	89.82	8,533.11	6.20	1,974.42	1,974.43	0.00	0.00	0.00
10,400.00	89.90	89.82	8,533.28	6.51	2,074.42	2,074.43	0.00	0.00	0.00
10,500.00	89.90	89.82	8,533.46	6.83	2,174.42	2,174.43	0.00	0.00	0.00

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Site West Shugart 2-19-30 State 4H
Company:	Permian District	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Project:	NM - Bone Spring Sand Project	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	West Shugart 2-19-30 State 4H	North Reference:	Grid
Well:	Well #1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plat- 11/12/12		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,600.00	89.90	89.82	8,533.63	7.14	2,274.42	2,274.43	0.00	0.00	0.00
10,700.00	89.90	89.82	8,533.81	7.45	2,374.42	2,374.43	0.00	0.00	0.00
10,800.00	89.90	89.82	8,533.98	7.77	2,474.42	2,474.43	0.00	0.00	0.00
10,900.00	89.90	89.82	8,534.15	8.08	2,574.42	2,574.43	0.00	0.00	0.00
11,000.00	89.90	89.82	8,534.33	8.40	2,674.42	2,674.43	0.00	0.00	0.00
11,100.00	89.90	89.82	8,534.50	8.71	2,774.42	2,774.43	0.00	0.00	0.00
11,200.00	89.90	89.82	8,534.68	9.02	2,874.42	2,874.43	0.00	0.00	0.00
11,300.00	89.90	89.82	8,534.85	9.34	2,974.42	2,974.43	0.00	0.00	0.00
11,400.00	89.90	89.82	8,535.03	9.65	3,074.42	3,074.43	0.00	0.00	0.00
11,500.00	89.90	89.82	8,535.20	9.97	3,174.42	3,174.43	0.00	0.00	0.00
11,600.00	89.90	89.82	8,535.38	10.28	3,274.42	3,274.43	0.00	0.00	0.00
11,700.00	89.90	89.82	8,535.55	10.59	3,374.42	3,374.43	0.00	0.00	0.00
11,800.00	89.90	89.82	8,535.72	10.91	3,474.42	3,474.43	0.00	0.00	0.00
11,900.00	89.90	89.82	8,535.90	11.22	3,574.41	3,574.43	0.00	0.00	0.00
12,000.00	89.90	89.82	8,536.07	11.54	3,674.41	3,674.43	0.00	0.00	0.00
12,100.00	89.90	89.82	8,536.25	11.85	3,774.41	3,774.43	0.00	0.00	0.00
12,200.00	89.90	89.82	8,536.42	12.16	3,874.41	3,874.43	0.00	0.00	0.00
12,300.00	89.90	89.82	8,536.60	12.48	3,974.41	3,974.43	0.00	0.00	0.00
12,400.00	89.90	89.82	8,536.77	12.79	4,074.41	4,074.43	0.00	0.00	0.00
12,500.00	89.90	89.82	8,536.95	13.11	4,174.41	4,174.43	0.00	0.00	0.00
12,600.00	89.90	89.82	8,537.12	13.42	4,274.41	4,274.43	0.00	0.00	0.00
12,700.00	89.90	89.82	8,537.30	13.73	4,374.41	4,374.43	0.00	0.00	0.00
12,800.00	89.90	89.82	8,537.47	14.05	4,474.41	4,474.43	0.00	0.00	0.00
12,900.00	89.90	89.82	8,537.64	14.36	4,574.41	4,574.43	0.00	0.00	0.00
13,000.00	89.90	89.82	8,537.82	14.67	4,674.41	4,674.43	0.00	0.00	0.00
13,100.00	89.90	89.82	8,537.99	14.99	4,774.41	4,774.43	0.00	0.00	0.00
13,103.60	89.90	89.82	8,538.00	15.00	4,778.01	4,778.03	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
WS 2-19-30 4H- SHL-	0.00	0.00	8,530.00	0.00	0.00	616,927.00	617,854.00	32.695446	-103.950234
- plan misses target center by 197.73ft at 8418.55ft MD (8383.88 TVD, 0.42 N, 133.21 E)									
- Point									
WS 2-19-30 4H- BHL-	0.00	0.00	8,538.00	15.00	4,778.01	616,942.00	622,632.00	32.695439	-103.934703
- plan hits target center									
- Point									

Project: NM - Bone Spring Sand Project
 Site: West Shugart 2-19-30 State 4H
 Well: Well #1
 Wellbore: Wellbore #1
 Design: Plat- 11/12/12

PROJECT DETAILS: NM - Bone Spring Sand Project

Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001

