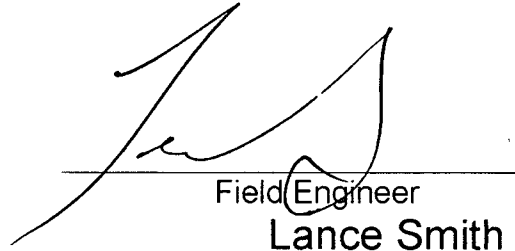


3950 Interwood South Parkway • Houston, TX 77032

PHONE 281.986.4400 • FAX 281.986.4499

State Of New Mexico, Eddy County

I, Lance Smith, certify that I am employed by Halliburton Energy Services, Inc. (aka Sperry Drilling) and that on the dates of 19-May-14 through 4-June-14. I did conduct or supervise the taking of a DWD directional survey for the well from a depth of 493' MD to a depth of 12211' MD. This data is true, correct, complete and within the limitations of the tools as set forth by Halliburton Energy Services, Inc. (aka Sperry Drilling). I am authorized and qualified to make this report and this survey was conducted at the request of Chevron U.S.A Inc., for the well Hayhurst 16 25 27 1H, API No. 30-015-41120-0000 in Eddy County, Texas. I have reviewed this report and find that it conforms to the principles and procedures as set forth by Halliburton Energy Services, Inc. (aka Sperry Drilling).



Field Engineer
Lance Smith

Chevron U.S.A Inc.
Hayhurst 16 25 27 1H
Eddy County, New Mexico
Ensign 767
API# 30-015-41120-0000

NM OIL CONSERVATION
ARTESIA DISTRICT
NOV 27 2014
RECEIVED

May 19, 2014- June 4, 2014
HD-MJ-0901331874

Sperry Drilling
MWD Survey Report

Submitted by Lance Smith

3950 Interwood South Parkway

Houston, TX 77032

Ph: 281.986.4400

HALLIBURTON

Drilling and Formation
Evaluation

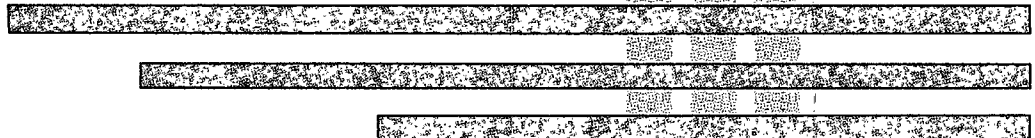


TABLE OF CONTENTS

1. General Information
2. Directional Survey Data

GENERAL INFORMATION

Company	: Chevron USA, Inc.
Rig	: Ensign 767
Well	: Hayhurst 16 25 27
Field	: Wildcat
Lease Name	: Hayhurst
State	: New Mexico
County	: Eddy
Country	: USA
API Number	: 30-015-41120
Sperry Drilling Job Number	: HD-XX-0901331874
Job Start Date	: 19-May-14
Job End Date	: 04-Jun-14
North Reference	: Grid
Total Correction (deg)	: 7.556
Dip Angle (deg)	: 59.906
Total Magnetic Field (nT)	: 48196
Date of Magnetic Data	: 20 May, 2014
Well Head coordinates N	: 32 deg. 8 min 12.35 sec North
Well Head coordinates E	: 104 deg. 11 min 45.56 sec West
Vertical section direction (deg)	: 179.80
Unit Number	: 11009812
MWD Engineers	: Lance Smith, Logan Roberts
Company Representatives	: Brad Osburn, John Akin
Company Geologist:	: Ryan Jensen,

DIRECTIONAL SURVEY DATA

Tie-in

0.00 0.00 0.00 0.00 0.00 N 0.00 E

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100)
493.00	4.48	242.54	492.50	8.89 S	17.10 W	8.83	0.91
583.00	3.47	234.72	582.28	12.09 S	22.45 W	12.01	1.27
674.00	2.34	220.84	673.16	15.09 S	25.92 W	15.00	1.45
768.00	2.79	229.70	767.07	18.02 S	28.92 W	17.92	0.64
857.00	2.16	224.87	855.98	20.61 S	31.76 W	20.50	0.75
949.00	2.00	227.12	947.92	22.93 S	34.16 W	22.81	0.20
1047.00	2.07	229.11	1,045.86	25.25 S	36.74 W	25.12	0.10
1144.00	2.45	232.98	1,142.79	27.64 S	39.72 W	27.51	0.42
1239.00	2.65	238.95	1,237.69	30.00 S	43.22 W	29.85	0.35
1335.00	3.55	245.06	1,333.55	32.40 S	47.82 W	32.23	1.00
1430.00	2.69	223.23	1,428.41	35.26 S	52.01 W	35.08	1.53
1526.00	1.77	145.80	1,524.36	38.12 S	52.72 W	37.94	3.00
1621.00	2.97	104.90	1,619.28	39.97 S	49.51 W	39.80	2.11
1716.00	2.51	100.13	1,714.17	40.97 S	45.09 W	40.81	0.54
1811.00	3.95	104.46	1,809.02	42.15 S	39.87 W	42.01	1.53
1905.00	3.94	100.98	1,902.80	43.58 S	33.57 W	43.46	0.25
2000.00	3.33	97.55	1,997.61	44.56 S	27.63 W	44.46	0.69
2096.00	1.97	99.04	2,093.50	45.19 S	23.24 W	45.10	1.41
2191.00	0.88	104.33	2,188.47	45.62 S	20.92 W	45.55	1.16
2281.00	0.85	106.41	2,278.46	45.98 S	19.60 W	45.92	0.05
2376.00	1.01	102.67	2,373.45	46.37 S	18.11 W	46.30	0.18
2472.00	0.66	113.96	2,469.44	46.78 S	16.78 W	46.72	0.40
2661.00	0.84	124.15	2,658.42	48.00 S	14.63 W	47.95	0.12
2851.00	0.70	124.90	2,848.40	49.45 S	12.52 W	49.41	0.07
3041.00	0.49	105.85	3,038.39	50.34 S	10.77 W	50.30	0.15
3232.00	0.68	96.15	3,229.38	50.69 S	8.85 W	50.66	0.11
3420.00	0.66	111.26	3,417.37	51.20 S	6.71 W	51.18	0.09
3515.00	1.94	285.45	3,512.36	50.98 S	7.75 W	50.95	2.73
3705.00	2.10	277.16	3,702.24	49.69 S	14.30 W	49.64	0.18
3896.00	2.14	270.16	3,893.11	49.24 S	21.35 W	49.17	0.14
4086.00	2.79	295.88	4,082.94	47.21 S	29.06 W	47.11	0.67
4181.00	3.06	339.98	4,177.82	43.82 S	32.01 W	43.71	2.33
4370.00	1.64	21.13	4,366.67	36.55 S	32.76 W	36.43	1.12
4560.00	0.90	7.76	4,556.62	32.54 S	31.58 W	32.43	0.42
4750.00	0.73	7.47	4,746.60	29.86 S	31.22 W	29.75	0.09
4940.00	0.58	357.55	4,936.59	27.71 S	31.11 W	27.60	0.10
5130.00	0.25	356.45	5,126.59	26.34 S	31.17 W	26.23	0.17
5319.00	0.37	355.35	5,315.58	25.32 S	31.25 W	25.21	0.07
5510.00	0.07	148.84	5,506.58	24.80 S	31.24 W	24.69	0.23
5700.00	0.58	232.31	5,696.58	25.49 S	31.94 W	25.38	0.30
5891.00	1.84	176.21	5,887.54	29.13 S	32.50 W	29.02	0.83

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (in/100')
6082.00	1.51	208.84	6,078.46	34.39 S	33.51 W	34.27	0.52
6272.00	0.82	185.14	6,268.42	37.94 S	34.84 W	37.82	0.44
6462.00	0.70	142.37	6,458.41	40.21 S	34.26 W	40.09	0.30
6652.00	0.56	296.59	6,648.40	40.71 S	34.38 W	40.59	0.64
6842.00	1.19	283.48	6,838.38	39.84 S	37.12 W	39.71	0.35
6969.00	0.41	349.36	6,965.37	39.08 S	38.48 W	38.94	0.85
7059.00	0.20	36.62	7,055.37	38.63 S	38.45 W	38.50	0.35
7076.00	0.50	98.43	7,072.37	38.62 S	38.36 W	38.49	2.61
7139.00	3.21	178.52	7,135.33	40.42 S	38.04 W	40.29	5.02
7171.00	6.82	190.86	7,167.20	43.19 S	38.38 W	43.05	11.72
7203.00	11.77	191.29	7,198.77	48.26 S	39.38 W	48.12	15.45
7234.00	16.27	190.21	7,228.84	55.64 S	40.77 W	55.49	14.55
7266.00	20.10	186.03	7,259.24	65.52 S	42.14 W	65.37	12.62
7298.00	24.56	183.93	7,288.83	77.63 S	43.17 W	77.48	14.16
7329.00	29.16	183.57	7,316.48	91.60 S	44.08 W	91.45	14.87
7361.00	32.86	185.64	7,343.91	108.03 S	45.42 W	107.87	12.02
7393.00	36.88	187.74	7,370.16	126.19 S	47.57 W	126.02	13.11
7425.00	40.44	187.90	7,395.14	145.99 S	50.29 W	145.81	11.12
7456.00	44.44	185.60	7,418.02	166.76 S	52.73 W	166.57	13.84
7487.00	49.06	184.97	7,439.25	189.24 S	54.81 W	189.04	14.99
7519.00	53.17	183.72	7,459.33	214.07 S	56.69 W	213.87	13.20
7550.00	56.76	181.97	7,477.13	239.41 S	57.94 W	239.21	12.45
7582.00	59.02	179.61	7,494.14	266.51 S	58.31 W	266.31	9.44
7614.00	60.77	178.51	7,510.19	294.19 S	57.85 W	293.99	6.22
7645.00	62.92	178.17	7,524.82	321.51 S	57.06 W	321.31	7.01
7677.00	66.86	177.86	7,538.40	350.46 S	56.06 W	350.26	12.34
7709.00	69.90	178.00	7,550.18	380.19 S	54.98 W	379.99	9.52
7740.00	71.15	178.09	7,560.52	409.39 S	53.98 W	409.20	4.02
7772.00	73.33	178.15	7,570.28	439.85 S	52.98 W	439.66	6.81
7803.00	76.38	179.18	7,578.38	469.76 S	52.28 W	469.58	10.36
7835.00	78.79	179.11	7,585.26	501.01 S	51.82 W	500.82	7.54
7867.00	81.07	179.20	7,590.85	532.51 S	51.36 W	532.33	7.13
7899.00	84.22	179.10	7,594.95	564.24 S	50.89 W	564.06	9.86
7931.00	88.03	179.53	7,597.11	596.16 S	50.51 W	595.98	11.96
8026.00	92.34	178.54	7,596.81	691.12 S	48.91 W	690.94	4.66
8095.00	91.97	178.83	7,594.21	760.05 S	47.33 W	759.88	0.68
8121.00	91.94	178.92	7,593.32	786.03 S	46.82 W	785.86	0.36
8217.00	90.71	177.97	7,591.10	881.97 S	44.21 W	881.81	1.62
8312.00	91.76	177.97	7,589.06	976.89 S	40.85 W	976.74	1.11
8407.00	90.86	176.30	7,586.88	1,071.74 S	36.10 W	1071.60	2.00
8502.00	90.00	175.39	7,586.17	1,166.48 S	29.21 W	1166.37	1.32
8598.00	91.08	175.06	7,585.26	1,262.14 S	21.22 W	1262.06	1.17
8693.00	89.51	173.78	7,584.78	1,356.69 S	11.98 W	1356.64	2.13
8788.00	90.77	173.84	7,584.55	1,451.13 S	1.74 W	1451.12	1.33
8883.00	89.01	174.53	7,584.73	1,545.64 S	7.89 E	1545.66	1.99

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
8978.00	90.31	174.93	7,585.29	1,640.23 S	16.62 E	1640.28	1.43
9072.00	88.40	176.45	7,586.35	1,733.95 S	23.69 E	1734.02	2.60
9167.00	87.91	178.38	7,589.41	1,828.80 S	27.98 E	1828.89	2.10
9263.00	88.61	180.97	7,592.33	1,924.75 S	28.52 E	1924.83	2.80
9358.00	89.48	183.21	7,593.92	2,019.66 S	25.06 E	2019.74	2.53
9454.00	90.89	183.67	7,593.60	2,115.49 S	19.29 E	2115.54	1.55
9548.00	89.69	182.62	7,593.12	2,209.34 S	14.13 E	2209.38	1.70
9642.00	90.77	182.27	7,592.75	2,303.25 S	10.12 E	2303.27	1.21
9737.00	90.92	181.85	7,591.34	2,398.18 S	6.71 E	2398.19	0.48
9832.00	89.54	181.77	7,590.96	2,493.13 S	3.71 E	2493.13	1.46
9926.00	90.96	181.83	7,590.55	2,587.08 S	0.76 E	2587.07	1.51
10021.00	92.10	182.21	7,588.02	2,681.99 S	2.58 W	2681.96	1.27
10115.00	90.09	182.32	7,586.23	2,775.89 S	6.29 W	2775.85	2.14
10211.00	90.86	182.97	7,585.43	2,871.78 S	10.72 W	2871.73	1.05
10305.00	89.54	183.25	7,585.10	2,965.64 S	15.83 W	2965.57	1.44
10400.00	88.70	183.27	7,586.56	3,060.48 S	21.23 W	3060.38	0.88
10495.00	89.78	183.33	7,587.81	3,155.31 S	26.70 W	3155.20	1.14
10590.00	91.14	183.83	7,587.04	3,250.12 S	32.63 W	3249.99	1.52
10685.00	89.88	182.53	7,586.20	3,344.96 S	37.89 W	3344.81	1.91
10779.00	91.11	182.70	7,585.39	3,438.86 S	42.18 W	3438.69	1.33
10875.00	90.71	182.54	7,583.87	3,534.75 S	46.57 W	3534.57	0.45
10976.00	89.26	181.96	7,583.90	3,635.67 S	50.54 W	3635.47	1.54
11071.00	88.58	182.55	7,585.68	3,730.58 S	54.28 W	3730.36	0.94
11166.00	86.13	181.79	7,590.07	3,825.40 S	57.87 W	3825.17	2.71
11261.00	85.96	181.28	7,596.63	3,920.14 S	60.41 W	3919.90	0.57
11356.00	85.57	180.63	7,603.64	4,014.87 S	61.98 W	4014.62	0.80
11452.00	87.75	178.65	7,609.23	4,110.69 S	61.37 W	4110.45	3.06
11547.00	88.21	176.64	7,612.58	4,205.54 S	57.47 W	4205.32	2.17
11642.00	89.69	176.71	7,614.32	4,300.37 S	51.95 W	4300.16	1.56
11737.00	89.88	177.24	7,614.68	4,395.23 S	46.94 W	4395.04	0.60
11831.00	89.75	176.60	7,614.98	4,489.10 S	41.89 W	4488.92	0.70
11926.00	90.68	176.57	7,614.62	4,583.93 S	36.23 W	4583.77	0.97
12021.00	90.28	176.39	7,613.83	4,678.74 S	30.40 W	4678.61	0.46
12116.00	89.69	176.40	7,613.86	4,773.55 S	24.42 W	4773.44	0.62
12211.00	88.30	177.09	7,615.52	4,868.38 S	19.03 W	4868.29	1.63
12304.00	88.30	177.09	7,618.27	4,961.22 S	14.31 W	4961.14	0.01

SURVEY FOOTER

SURVEYS CALCULATED USING THE SHORT COLLAR METHOD.
 WELL ASSUMED VERTICAL AT SURFACE.
 SURVEYS FROM 493' MD TO 12211' MD PROVIDED BY SPERRY DRILLING SERVICES.
 SURVEY AT 12211' MD IS PROJECTED TO TD AT 12304' MD.
 SPERRY DRILLING ENGINEERS: LANCE SMITH, LOGAN ROBERTS

DIRECTIONAL SURVEY DATA NOTES

- Calculation based on minimum curvature method.
- Survey coordinates relative to well system reference point.
- TVD values given relative to drilling measurement point.
- Vertical section relative to well head.
- Vertical section is computed along a direction of 179.80 degrees (Grid)
- A total correction of 7.56 deg from Magnetic north to Grid north has been applied
- Horizontal displacement is relative to the well head.
- Horizontal displacement (closure) at 12,304.00 feet is 4,961.24 feet along 180.17 degrees (Grid)

WARRANTY

HALLIBURTON ENERGY SERVICES, INC. WILL USE ITS BEST EFFORTS TO FURNISH CUSTOMERS WITH ACCURATE INFORMATION AND INTERPRETATIONS THAT ARE PART OF, AND INCIDENT TO, THE SERVICES PROVIDED. HOWEVER, HALLIBURTON ENERGY SERVICES, INC. CANNOT AND DOES NOT WARRANT THE ACCURACY OR CORRECTNESS OF SUCH INFORMATION AND INTERPRETATIONS. UNDER NO CIRCUMSTANCES SHOULD ANY SUCH INFORMATION OR INTERPRETATION BE RELIED UPON AS THE SOLE BASIS FOR ANY DRILLING, COMPLETION, PRODUCTION, OR FINANCIAL DECISION OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING VENTURE, DRILLING RIG OR ITS CREW OR ANY THIRD PARTY. THE CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DRILLING, COMPLETION, AND PRODUCTION OPERATION. HALLIBURTON ENERGY SERVICES, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES RENDERED. IN NO EVENT WILL HALLIBURTON ENERGY SERVICES, INC. SERVICES BE LIABLE FOR FAILURE TO OBTAIN ANY PARTICULAR RESULTS OR FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY INFORMATION OR INTERPRETATION PROVIDED BY HALLIBURTON ENERGY SERVICES, INC.

HALLIBURTON

Sperry Drilling

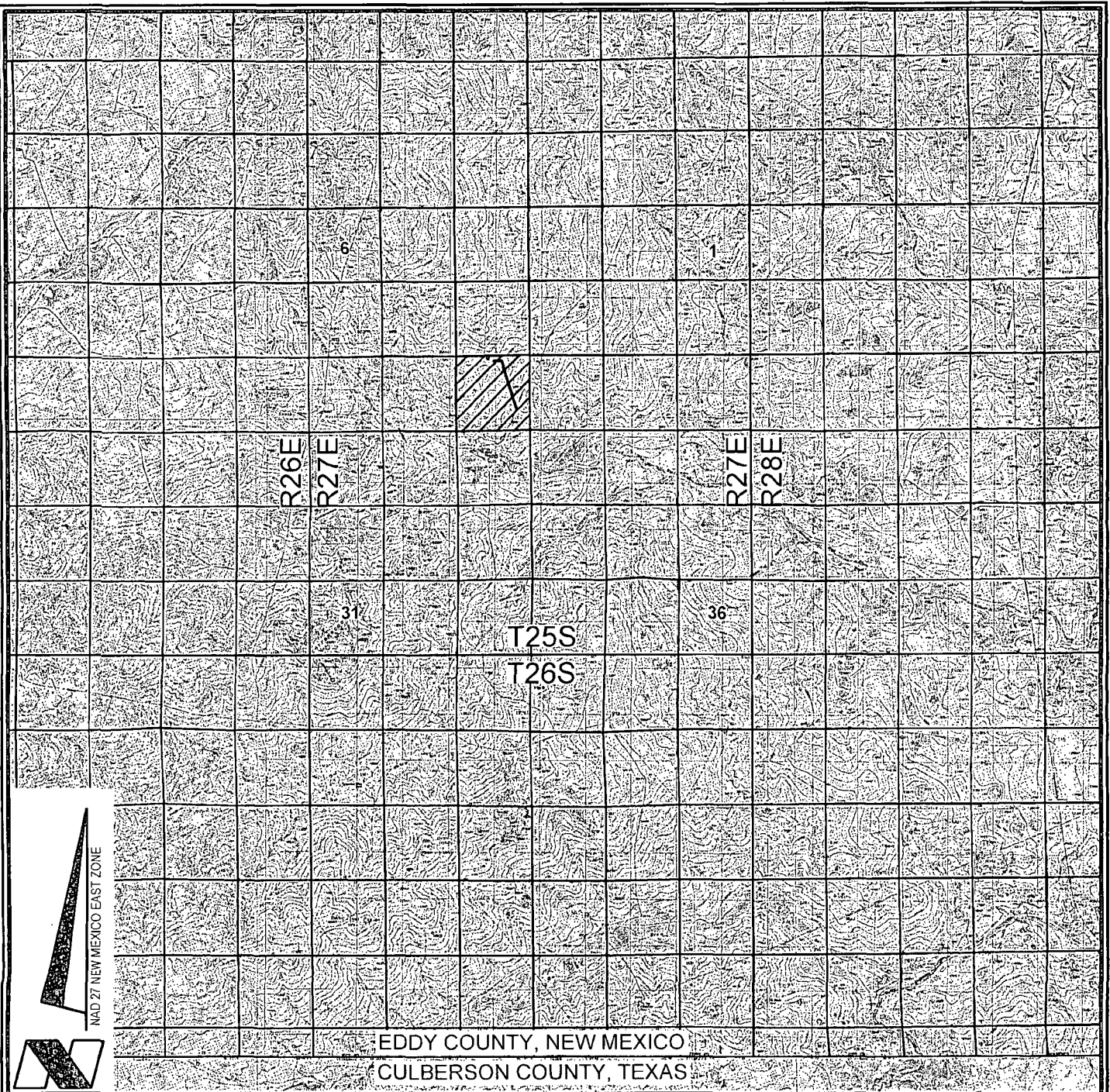
Halliburton / Sperry Drilling Services

3950 Interwood Dr.

Houston, Texas 77032

Phone: 281-986-4400

Fax: 281-986-4498



VICINITY MAP

10,000' 0 5,000' 10,000'

Scale: 1" = 10,000'

CHEVRON U.S.A. INC.

HAYHURST 16-25-27 STATE NO. 1H WELL

LOCATED 175' FNL AND 2280' FWL

SECTION 16, T25S-R27E

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: 04/09/2013 BMO

DATE: 01/28/2013

PROJ. MGR.: DBM

SHEET 2 OF 3 SHEETS

FILENAME: T:\2012\2128637\DWG\CUI_HAYHURST 16-25-27 STATE 1H APD.dwg

