



September 17, 2014

Concho Resources, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

15-42244

NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 08 2014

RECEIVED

Attn: Kanicia Castillo

RE: DODD Federal Unit No. 926H

Please find enclosed a copy of the survey from 0.00' to 4162.00' ran on the above referenced well.

Sincerely,

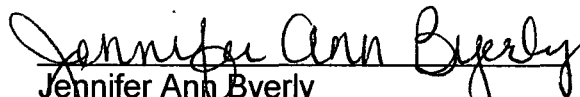

Keith Havelka
Operations

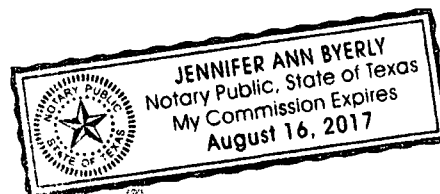
STATE OF TEXAS §

§

COUNTY OF NUECES §

This instrument was acknowledged before me on the 17 day of September A.D., 2014, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas



Company: COG Operating, LLC (Concho)
Lease/Well: DODD Federal Unit/No. 926H



Rig Name: United 43
State/County: New Mexico/Eddy
Latitude: 32.83, Longitude: -104.06
GRID North is 0.15 Degrees East of True North
VS-Azi: 0.00 Degrees



NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 08 2014
RECEIVED

Depth Reference : RKB = 14 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 9/11/2014 / 12:35

VES Survey International
West Texas
(432) 563-5444

Surveyor: Evan Goetz

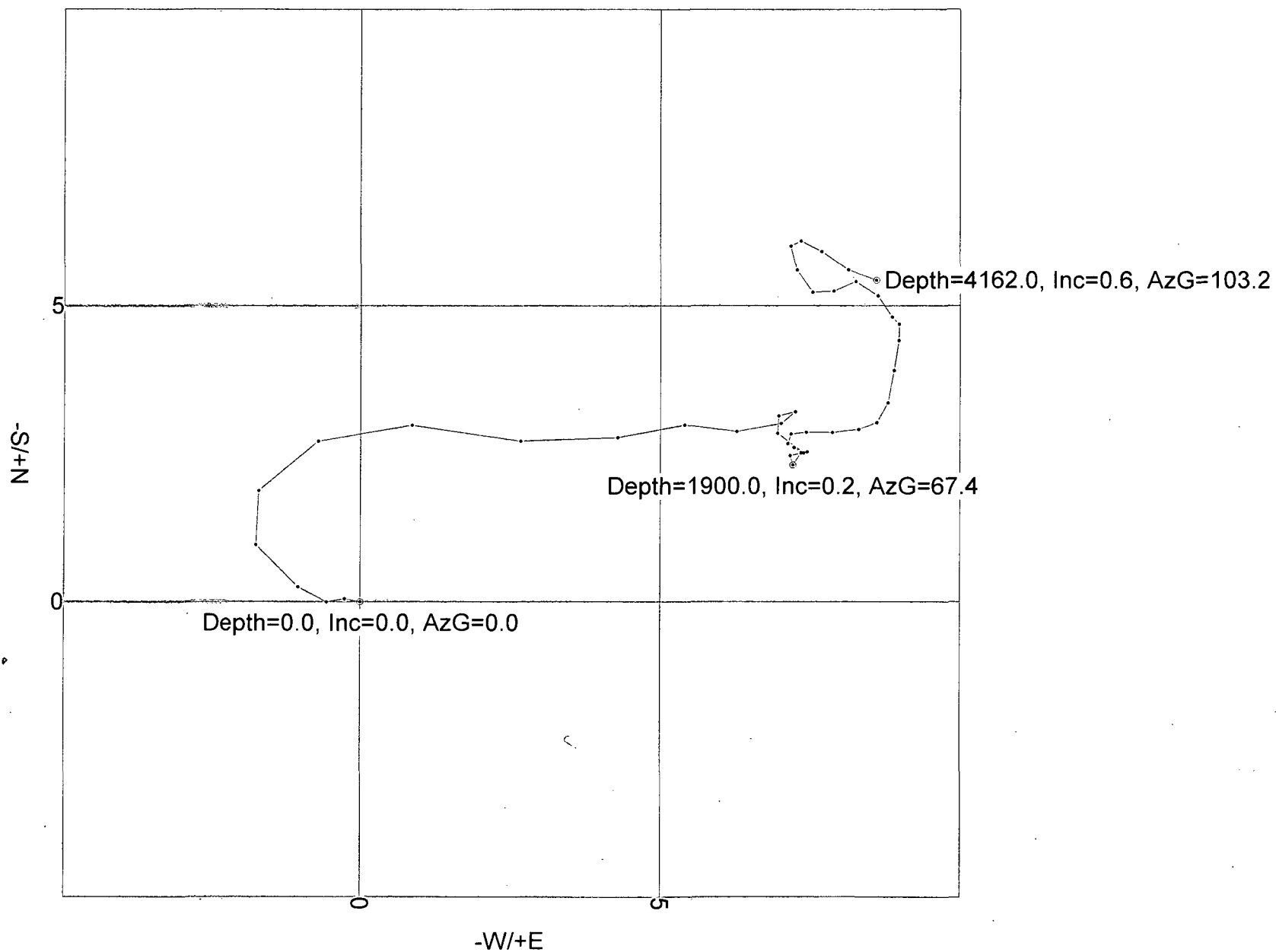
DODD Federal Unit No. 926H / API 30-015-42244

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.31	281.20	100.00	0.05	-0.26	0.05	0.27	281.20	0.31
200.00	0.13	198.54	200.00	0.00	-0.56	0.00	0.56	269.83	0.32
300.00	0.65	309.15	300.00	0.25	-1.04	0.25	1.07	283.64	0.71
400.00	0.51	323.10	399.99	0.97	-1.75	0.97	2.00	298.99	0.20
500.00	0.73	29.63	499.99	1.88	-1.70	1.88	2.53	317.76	0.70
600.00	0.85	67.20	599.98	2.71	-0.71	2.71	2.80	345.41	0.52
700.00	1.01	91.37	699.97	2.98	0.86	2.98	3.10	16.02	0.42
800.00	1.11	104.70	799.95	2.71	2.67	2.71	3.81	44.51	0.26
900.00	0.86	66.08	899.93	2.77	4.29	2.77	5.11	57.11	0.69
1000.00	0.50	101.88	999.93	2.99	5.40	2.99	6.17	61.05	0.54
1100.00	0.51	92.99	1099.92	2.87	6.27	2.87	6.90	65.38	0.08
1200.00	0.39	61.49	1199.92	3.01	7.01	3.01	7.63	66.76	0.27
1300.00	0.08	305.05	1299.92	3.21	7.25	3.21	7.93	66.12	0.43
1400.00	0.29	244.10	1399.92	3.14	6.97	3.14	7.65	65.75	0.26
1500.00	0.32	132.16	1499.92	2.85	6.96	2.85	7.52	67.76	0.50
1600.00	0.31	122.61	1599.92	2.51	7.39	2.51	7.81	71.22	0.05
1700.00	0.27	315.16	1699.92	2.53	7.45	2.53	7.87	71.23	0.57
1800.00	0.30	208.10	1799.92	2.47	7.17	2.47	7.58	70.99	0.45

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Dég/100
1900.00	0.21	67.42	1899.92	2.31	7.21	2.31	7.57	72.24	0.47
2000.00	0.16	348.30	1999.92	2.52	7.35	2.52	7.77	71.09	0.24
2100.00	0.12	238.15	2099.92	2.60	7.23	2.60	7.69	70.20	0.23
2200.00	0.14	350.90	2199.92	2.67	7.13	2.67	7.61	69.48	0.21
2300.00	0.10	57.90	2299.92	2.83	7.18	2.83	7.72	68.48	0.13
2400.00	0.21	93.66	2399.91	2.87	7.44	2.87	7.97	68.92	0.14
2500.00	0.29	88.17	2499.91	2.86	7.87	2.86	8.38	70.01	0.09
2600.00	0.22	77.23	2599.91	2.91	8.32	2.91	8.81	70.69	0.09
2700.00	0.15	58.35	2699.91	3.03	8.62	3.03	9.13	70.65	0.09
2800.00	0.32	15.58	2799.91	3.36	8.80	3.36	9.42	69.09	0.23
2900.00	0.32	5.31	2899.91	3.91	8.90	3.91	9.72	66.30	0.06
3000.00	0.27	13.01	2999.91	4.42	8.98	4.42	10.01	63.82	0.06
3100.00	0.07	309.96	3099.91	4.69	8.99	4.69	10.14	62.45	0.25
3200.00	0.12	319.36	3199.91	4.81	8.87	4.81	10.09	61.54	0.05
3300.00	0.38	329.38	3299.91	5.17	8.64	5.17	10.07	59.10	0.26
3400.00	0.24	259.35	3399.91	5.41	8.26	5.41	9.88	56.78	0.37
3500.00	0.24	233.32	3499.91	5.25	7.89	5.25	9.48	56.36	0.11
3600.00	0.24	298.92	3599.90	5.23	7.54	5.23	9.17	55.26	0.26
3700.00	0.33	343.99	3699.90	5.60	7.28	5.60	9.18	52.39	0.23
3800.00	0.14	352.32	3799.90	6.00	7.18	6.00	9.36	50.10	0.19
3900.00	0.22	101.14	3899.90	6.09	7.35	6.09	9.55	50.34	0.30
4000.00	0.25	130.95	3999.90	5.91	7.70	5.91	9.71	52.46	0.12
4100.00	0.37	120.83	4099.90	5.61	8.14	5.61	9.88	55.44	0.13
4162.00	0.57	103.22	4161.90	5.43	8.61	5.43	10.18	57.75	0.39



VES Survey International
West Texas
(432) 563-5444
Surveyor: Evan Goetz
DODD Federal Unit No. 926H / API 30-015-42244



VES Survey Date: 08/16/2014

WELL NAME AND NUMBER Dodd Federal Unit No. 926HLOCATION Section 22, T17S, R29E, Unit A, 90 FNL, 963 FEL, Eddy CountyOPERATOR COG Operating LLCDRILLING CONTRACTOR United Drilling, Inc.

The undersigned hereby certifies that he is an authorized representative of the drilling contractor who drilled the above described well and had conducted deviation test and obtained the following results:

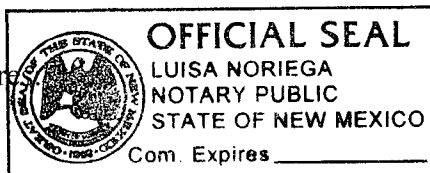
Degrees @ Depth	Degrees @ Depth	Degrees @ Depth
1.1° @ 237'	5.5° @ 4301'	62.1° @ 4901'
.5° @ 461'	12.0° @ 4364'	65.5° @ 4932'
.5° @ 804'	15.2° @ 4396'	68.8° @ 4964'
.2° @ 1102'	17.9° @ 4428'	71.2° @ 4996'
.6° @ 1354'	20.5° @ 4459'	90.5° @ 5225'
.7° @ 1625'	23.4° @ 4491'	90.8° @ 5320'
.4° @ 1878'	26.5° @ 4522'	90.9° @ 5415'
.2° @ 2129'	29.5° @ 4554'	91.4° @ 5604'
.4° @ 2372'	32.5° @ 4585'	91.1° @ 5699'
.2° @ 2631'	35.8° @ 4617'	91.6° @ 5793'
.6° @ 2883'	39.5° @ 4648'	90.7° @ 5889'
.6° @ 3138'	43.2° @ 4680'	90.9° @ 6078'
.8° @ 3391'	46.4° @ 4711'	90.7° @ 6173'
.5° @ 3663'	48.7° @ 4743'	90.2° @ 6267'
.5° @ 3920'	52.0° @ 4774'	91.0° @ 6351'
.9° @ 4189'	55.2° @ 4806'	91.4° @ 6541'
.4° @ 4238'	57.5° @ 4837'	91.3° @ 6635'
2.0° @ 4273'	59.4° @ 4869'	90.4° @ 6730'

Drilling Contractor- UNITED DRILLING, INC.By: Angel Salazar

(Angel Salazar)

Title: Vice PresidentSubscribed and sworn to before me this 3rd day of Sept., 2014.Luisa Noriega
Notary PublicChaves NM
County State

My Commission Expires



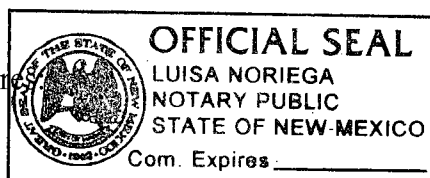
WELL NAME AND NUMBER Dodd Federal Unit No. 926HLOCATION Section 22, T17S, R29E, Unit A, 90 FNL, 963 FEL, Eddy CountyOPERATOR COG Operating LLCDRILLING CONTRACTOR United Drilling, Inc.

The undersigned hereby certifies that he is an authorized representative of the drilling contractor who drilled the above described well and had conducted deviation test and obtained the following results:

Degrees @ Depth	Degrees @ Depth	Degrees @ Depth
90.3° @ 6835'	90.6° @ 8811'	
90.8° @ 6919'	90.2° @ 8906'	
90.8° @ 7014'	90.0° @ 9001'	
90.8° @ 7108'	91.2° @ 9095'	
90.7° @ 7203'	90.9° @ 9190'	
90.7° @ 7297'	90.8° @ 9285'	
91.3° @ 7392'	91.1° @ 9519'	
91.3° @ 7487'	91.1° @ 9569'	
91.1° @ 7676'	91.3° @ 9708'	
91.0° @ 7771'	91.6° @ 9852'	
91.3° @ 7865'	91.6° @ 9906'	
91.6° @ 7959'		
91.7° @ 8054'		
91.5° @ 8149'		
91.3° @ 8244'		
91.0° @ 8338'		
91.2° @ 8527'		
89.9° @ 8717'		

Drilling Contractor- UNITED DRILLING, INC.By: 
(Angel Salazar)Title: Vice PresidentSubscribed and sworn to before me this 3rd day of Sept., 2014.
Notary PublicChaves NM
County State

My Commission Expires



COG OPERATING

Dodd (NAD27)

Eddy County, NM (Grid North)

Dodd Federal Unit #926H

VH - Job #320814-KW-1022

Survey: Gyro

SDI Survey Report

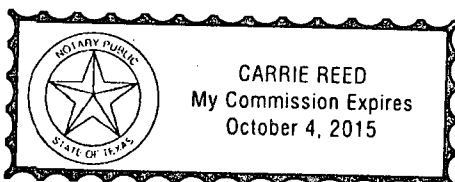
This survey is correct to the best of my knowledge and is supported by actual field data.

R. Wharton

Notarized this date 31st of August, 2014.

Carrie Reed

Notary Signature
County of Midland
State of Texas



SDI
SDI Survey Report

Company:	COG OPERATING	Local Co-ordinate Reference:	Well Dodd Federal Unit #926H
Project:	Dodd (NAD27)	TVD Reference:	Mean Sea Level (System)
Site:	Eddy County, NM (Grid North)	MD Reference:	Mean Sea Level (System)
Well:	Dodd Federal Unit #926H	North Reference:	Grid
Wellbore:	VH - Job #320814-KW-1022	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #320814-KW-1022	Database:	EDM-Regulatory

Project	Dodd (NAD27)		
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		Eddy County, NM (Grid North)			
Site Position:		Northing:	666,757.09 usft	Latitude:	32° 49' 57.705 N
From:	Lat/Long	Easting:	584,977.44 usft	Longitude:	104° 3' 24.044 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.15 °

Well	Dodd Federal Unit #926H, Horizontal					
Well Position	+N/-S	0.0 usft	Northing:	666,757.09 usft	Latitude:	32° 49' 57.705 N
	+E/-W	0.0 usft	Easting:	584,977.44 usft	Longitude:	104° 3' 24.044 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	0.0 usft

Wellbore	VH - Job #320814-KW-1022				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/14/2014	7.47	60.59	48,638

Design		VH - Job #320814-KW-1022		
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	299.95

Survey Program	Date	8/20/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	4,494.0	Gyro (VH - Job #320814-KW-1022)	Keeper	Keeper Gyro	

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0	
100.0	0.19	45.68	100.0	0.1	0.1	45.68	0.2	
200.0	0.22	122.95	200.0	0.1	0.4	72.28	0.4	
300.0	0.06	210.74	300.0	0.0	0.5	92.38	0.5	
400.0	0.24	188.34	400.0	-0.3	0.5	119.98	0.5	
500.0	0.55	124.70	500.0	-0.8	0.8	131.95	1.1	
600.0	0.47	99.77	600.0	-1.1	1.6	123.82	2.0	
700.0	0.50	77.65	700.0	-1.1	2.5	113.51	2.7	
800.0	0.55	70.37	800.0	-0.8	3.3	103.76	3.4	
900.0	0.60	78.37	900.0	-0.6	4.3	97.30	4.3	
1,000.0	0.32	93.09	1,000.0	-0.5	5.1	95.17	5.1	
1,100.0	0.42	11.00	1,100.0	-0.1	5.5	91.23	5.5	

SDI

SDI Survey Report

Company:	COG OPERATING	Local Co-ordinate Reference:	Well Dodd Federal Unit #926H
Project:	Dodd (NAD27)	TVD Reference:	Mean Sea Level (System)
Site:	Eddy County, NM (Grid North)	MD Reference:	Mean Sea Level (System)
Well:	Dodd Federal Unit #926H	North Reference:	Grid
Wellbore:	VH - Job #320814-KW-1022	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #320814-KW-1022	Database:	EDM-Regulatory

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure-Azimuth (°)	Closure Distance (usft)	
1,200.0	0.39	56.16	1,200.0	0.4	5.8	85.74	5.8	
1,300.0	0.30	355.73	1,300.0	0.9	6.1	81.73	6.1	
1,400.0	0.49	21.10	1,400.0	1.5	6.2	76.03	6.4	
1,500.0	0.29	353.21	1,500.0	2.2	6.3	70.88	6.7	
1,600.0	0.35	343.27	1,600.0	2.7	6.2	66.22	6.8	
1,700.0	0.12	323.68	1,700.0	3.1	6.1	62.80	6.8	
1,800.0	0.18	290.90	1,800.0	3.3	5.9	60.92	6.7	
1,900.0	0.04	178.41	1,900.0	3.3	5.7	60.14	6.6	
2,000.0	0.30	300.39	2,000.0	3.4	5.5	58.39	6.4	
2,100.0	0.26	335.04	2,100.0	3.7	5.2	54.27	6.4	
2,200.0	0.33	294.92	2,200.0	4.0	4.8	49.94	6.3	
2,300.0	0.53	296.61	2,300.0	4.4	4.1	43.38	6.0	
2,400.0	0.46	312.55	2,400.0	4.8	3.4	35.20	5.9	
2,500.0	0.34	303.19	2,500.0	5.3	2.9	28.56	6.0	
2,600.0	0.44	292.65	2,599.9	5.6	2.3	22.11	6.0	
2,700.0	0.53	289.61	2,699.9	5.9	1.5	14.11	6.1	
2,800.0	0.19	297.54	2,799.9	6.1	0.9	8.34	6.2	
2,900.0	0.05	174.30	2,899.9	6.2	0.8	6.99	6.2	
3,000.0	0.13	19.62	2,999.9	6.2	0.8	7.31	6.3	
3,100.0	0.23	326.14	3,099.9	6.5	0.7	6.36	6.5	
3,200.0	0.24	272.62	3,199.9	6.7	0.4	3.46	6.7	
3,300.0	0.27	281.82	3,299.9	6.7	0.0	359.69	6.7	
3,400.0	0.39	329.50	3,399.9	7.1	-0.4	356.44	7.1	
3,500.0	0.22	344.47	3,499.9	7.5	-0.7	354.97	7.6	
3,600.0	0.07	35.86	3,599.9	7.8	-0.7	355.01	7.8	
3,700.0	0.22	212.82	3,699.9	7.7	-0.7	354.43	7.7	
3,800.0	0.45	218.49	3,799.9	7.2	-1.1	351.34	7.3	
3,900.0	0.27	231.14	3,899.9	6.7	-1.5	347.27	6.9	
4,000.0	0.44	192.04	3,999.9	6.2	-1.8	343.97	6.5	
4,100.0	0.35	198.21	4,099.9	5.6	-2.0	340.54	5.9	
4,200.0	0.42	239.56	4,199.9	5.1	-2.4	334.95	5.6	
4,300.0	0.72	204.05	4,299.9	4.3	-2.9	325.71	5.2	
4,400.0	0.70	214.06	4,399.9	3.2	-3.5	312.45	4.8	
4,494.0	0.63	184.52	4,493.9	2.3	-3.9	299.95	4.5	



Scientific Drilling

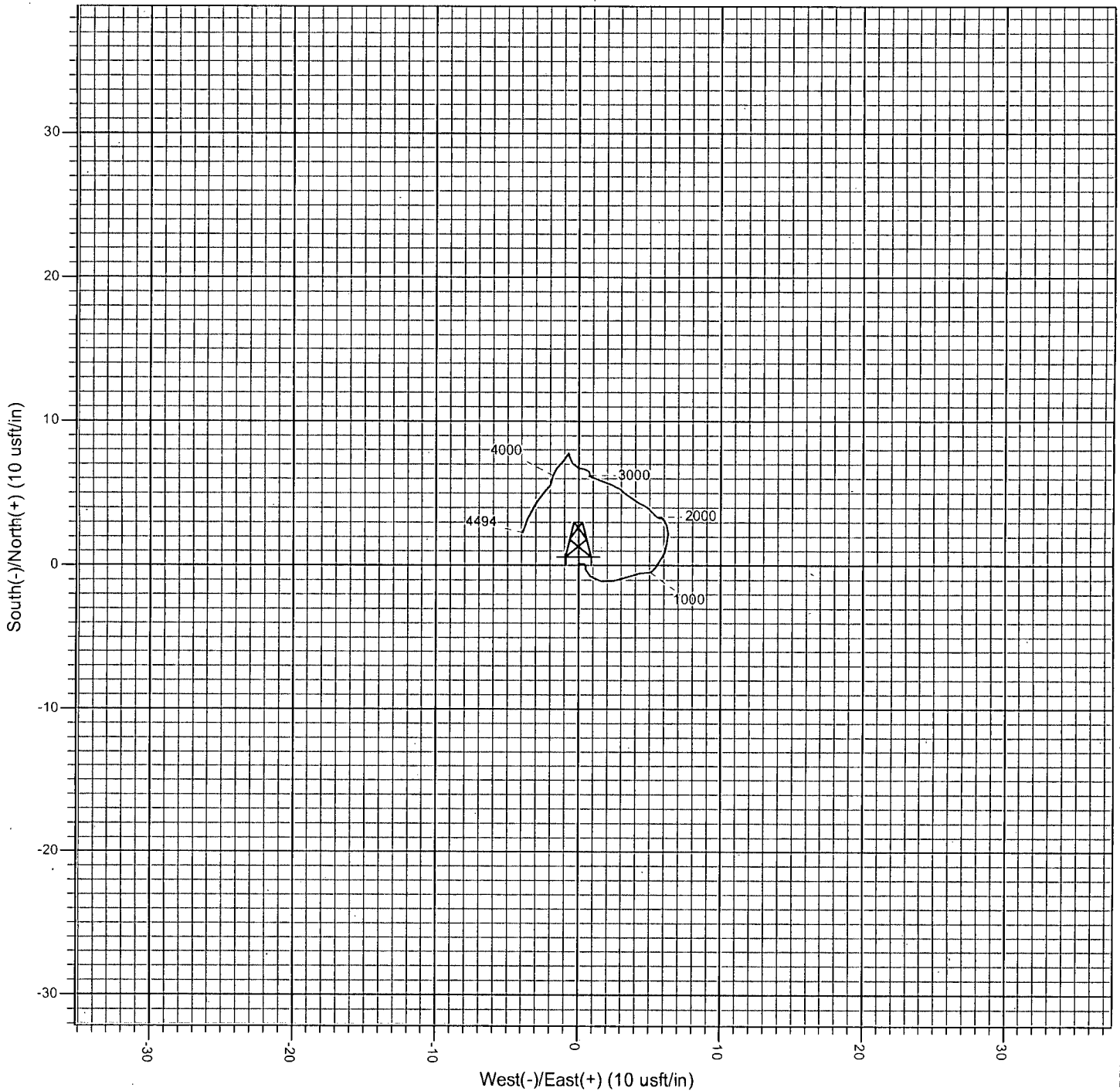
Project: Dodd (NAD27)
Eddy County, NM (Grid North)
Well: Dodd Federal Unit #926H
Wellbore: VH - Job #320814-KW-1022
Design: VH - Job #320814-KW-1022

WELL DETAILS: Dodd Federal Unit #926H

Mean Sea Level (System)

Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	666757.09	584977.44	32° 49' 57.705 N	104° 3' 24.044 W	



PROJECT DETAILS: Dodd (NAD27)	SITE DETAILS: Eddy County, NM (Grid North)
Geodetic System: US State Plane 1927 (Exact solution)	Site Centre Latitude: 32° 49' 57.705 N
Datum: NAD 1927 (NADCON CONUS)	Longitude: 104° 3' 24.044 W
Ellipsoid: Clarke 1866	Positional Uncertainty: 0.0
Zone: New Mexico East 3001	Convergence: 0.15
System Datum: Mean Sea Level	Local North: Grid

Archer

Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well 926H - Slot 926H
Project:	Eddy County, NM	TVD Reference:	3571' GL+12' KB @ 3583.00usft (Planning)
Site:	Dodd Federal Unit 926H	MD Reference:	3571' GL+12' KB @ 3583.00usft (Planning)
Well:	926H	North Reference:	Grid
Wellbore:	Lateral	Survey/Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM R5000.1 MULTI

Project: Eddy County, NM			
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: Dodd Federal Unit 926H					
Site Position:		Northing:	664,669.50 usft	Latitude:	32° 49' 37.05 N
From:	Map	Easting:	584,982.90 usft	Longitude:	104° 3' 24.04 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.15 °

Well	926H - Slot:926H					
Well Position	+N/-S	0.00 usft	Northing:	664,669.50 usft	Latitude:	32° 49' 37.05 N
	+E/-W	0.00 usft	Easting:	584,982.90 usft	Longitude:	104° 3' 24.04 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,571.00 usft

Wellbore	Lateral				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/20/2014	7.46	60.58	48,606

Design		Surveys			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	1.39	

Survey Program		Date 8/31/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	4,162.00	Survey #1 (Lateral)	Gyroscope	Gyrocompass Gyro
4,207.00	9,906.00	Survey #2 (Lateral)	MWD	MWD - Standard
9,951.00	9,951.00	Survey #3 (Lateral)	Project	Projection

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
100.00	0.31	281.20	100.00	0.05	-0.27	0.05	0.31	0.31	0.00
200.00	0.13	198.54	200.00	0.00	-0.57	-0.02	0.32	-0.18	-82.66
300.00	0.65	309.15	300.00	0.25	-1.04	0.22	0.71	0.52	110.61
400.00	0.51	323.10	399.99	0.96	-1.75	0.92	0.20	-0.14	13.95
500.00	0.73	29.63	499.99	1.87	-1.70	1.83	0.70	0.22	66.53
600.00	0.85	67.20	599.98	2.71	-0.70	2.70	0.52	0.12	37.57
700.00	1.01	91.37	699.97	2.98	0.86	3.00	0.42	0.16	24.17
800.00	1.11	104.70	799.95	2.71	2.68	2.78	0.27	0.10	13.33

Archer

Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well 926H - Slot 926H
Project:	Eddy County, NM	TVD Reference:	3571'GL+12'KB @ 3583.00usft (Planning)
Site:	Dodd Federal Unit 926H	MD Reference:	3571'GL+12'KB @ 3583.00usft (Planning)
Well:	926H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM:R5000.1 MULTI

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)
900.00	0.86	66.08	899.93	2.77	4.30	2.87	0.69	-0.25	-38.62
1,000.00	0.50	101.88	999.93	2.99	5.42	3.12	0.54	-0.36	35.80
1,100.00	0.51	92.99	1,099.92	2.87	6.29	3.02	0.08	0.01	-8.89
1,200.00	0.39	61.49	1,199.92	3.01	7.03	3.18	0.27	-0.12	-31.50
1,300.00	0.08	305.05	1,299.92	3.21	7.27	3.39	0.43	-0.31	-116.44
1,400.00	0.29	244.10	1,399.92	3.14	6.99	3.31	0.26	0.21	-60.95
1,500.00	0.32	132.16	1,499.92	2.85	6.97	3.01	0.51	0.03	-111.94
1,600.00	0.31	122.61	1,599.92	2.51	7.40	2.69	0.05	-0.01	-9.55
1,700.00	0.27	315.16	1,699.92	2.53	7.46	2.71	0.58	-0.04	-167.45
1,800.00	0.30	208.10	1,799.92	2.47	7.17	2.64	0.46	0.03	-107.06
1,900.00	0.21	67.42	1,899.92	2.31	7.22	2.48	0.48	-0.09	-140.68
2,000.00	0.16	348.30	1,999.92	2.52	7.36	2.69	0.24	-0.05	-79.12
2,100.00	0.12	238.15	2,099.92	2.60	7.24	2.77	0.23	-0.04	-110.15
2,200.00	0.14	350.90	2,199.92	2.66	7.14	2.84	0.22	0.02	112.75
2,300.00	0.10	57.90	2,299.91	2.83	7.19	3.00	0.14	-0.04	67.00
2,400.00	0.21	93.66	2,399.91	2.86	7.45	3.04	0.14	0.11	35.76
2,500.00	0.29	88.17	2,499.91	2.86	7.88	3.05	0.08	0.08	-5.49
2,600.00	0.22	77.23	2,599.91	2.91	8.32	3.11	0.08	-0.07	-10.94
2,700.00	0.15	58.35	2,699.91	3.02	8.62	3.23	0.09	-0.07	-18.88
2,800.00	0.32	15.58	2,799.91	3.36	8.81	3.57	0.23	0.17	-42.77
2,900.00	0.32	5.31	2,899.91	3.91	8.91	4.12	0.06	0.00	-10.27
3,000.00	0.27	13.01	2,999.91	4.42	8.99	4.63	0.06	-0.05	7.70
3,100.00	0.07	309.96	3,099.91	4.68	8.99	4.90	0.25	-0.20	-63.05
3,200.00	0.12	319.36	3,199.91	4.80	8.88	5.02	0.05	0.05	9.40
3,300.00	0.38	329.38	3,299.91	5.17	8.64	5.38	0.26	0.26	10.02
3,400.00	0.24	259.35	3,399.91	5.41	8.27	5.61	0.37	-0.14	-70.03
3,500.00	0.24	233.32	3,499.90	5.25	7.89	5.44	0.11	0.00	-26.03
3,600.00	0.24	298.92	3,599.90	5.23	7.54	5.41	0.26	0.00	65.60
3,700.00	0.33	343.99	3,699.90	5.60	7.28	5.78	0.23	0.09	45.07
3,800.00	0.14	352.32	3,799.90	6.00	7.18	6.18	0.19	-0.19	8.33
3,900.00	0.22	101.14	3,899.90	6.09	7.36	6.26	0.30	0.08	108.82
4,000.00	0.25	130.95	3,999.90	5.91	7.71	6.09	0.12	0.03	29.81
4,100.00	0.37	120.83	4,099.90	5.60	8.15	5.79	0.13	0.12	-10.12
4,162.00	0.57	103.22	4,161.90	5.42	8.62	5.63	0.39	0.32	-28.40
4,207.00	0.40	99.90	4,206.90	5.35	9.00	5.56	0.38	-0.38	-7.38
4,238.00	0.40	79.90	4,237.90	5.35	9.21	5.57	0.45	0.00	-64.52
4,270.00	2.00	4.70	4,269.89	5.92	9.36	6.15	6.05	5.00	-235.00
4,301.00	5.50	353.60	4,300.82	7.94	9.24	8.16	11.48	11.29	-35.81
4,333.00	8.90	353.40	4,332.56	11.92	8.79	12.13	10.63	10.63	-0.63
4,364.00	12.00	355.20	4,363.04	17.52	8.24	17.71	10.05	10.00	5.81
4,396.00	15.20	358.70	4,394.14	25.03	7.87	25.21	10.32	10.00	10.94
4,428.00	17.90	2.90	4,424.81	34.14	8.02	34.32	9.22	8.44	13.13
4,459.00	20.50	7.10	4,454.09	44.28	8.93	44.49	9.49	8.39	13.55

Archer

Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well 926H - Slot 926H
Project:	Eddy County, NM	TVD Reference:	3571' GL+12' KB @ 3583.00usft (Planning)
Site:	Dodd Federal Unit 926H	MD Reference:	3571' GL+12' KB @ 3583.00usft (Planning)
Well:	926H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM/R5000.1 MULTI

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)
4,491.00	23.40	11.00	4,483.77	56.08	10.84	56.33	10.14	9.06	12.19
4,522.00	26.50	11.50	4,511.87	68.91	13.39	69.21	10.02	10.00	1.61
4,554.00	29.50	10.20	4,540.12	83.66	16.21	84.03	9.57	9.38	-4.06
4,585.00	32.50	8.50	4,566.69	99.41	18.80	99.84	10.08	9.68	-5.48
4,617.00	35.80	7.50	4,593.17	117.20	21.29	117.68	10.46	10.31	-3.13
4,648.00	39.50	7.50	4,617.71	135.97	23.76	136.51	11.94	11.94	0.00
4,680.00	43.20	7.40	4,641.73	156.93	26.50	157.53	11.56	11.56	-0.31
4,711.00	46.40	6.70	4,663.72	178.61	29.18	179.26	10.44	10.32	-2.26
4,743.00	48.70	6.20	4,685.32	202.07	31.83	202.78	7.28	7.19	-1.56
4,774.00	52.00	6.20	4,705.10	225.79	34.40	226.56	10.65	10.65	0.00
4,806.00	55.20	7.00	4,724.09	251.37	37.37	252.21	10.20	10.00	2.50
4,837.00	57.50	7.00	4,741.26	276.99	40.51	277.89	7.42	7.42	0.00
4,869.00	59.40	7.10	4,758.00	304.05	43.86	305.02	5.94	5.94	0.31
4,901.00	62.10	7.70	4,773.64	331.73	47.46	332.79	8.59	8.44	1.88
4,932.00	65.50	8.50	4,787.32	359.27	51.38	360.41	11.21	10.97	2.58
4,964.00	68.80	8.50	4,799.75	388.43	55.74	389.66	10.31	10.31	0.00
4,996.00	71.20	8.00	4,810.69	418.18	60.05	419.52	7.64	7.50	-1.56
5,027.00	73.50	7.70	4,820.09	447.44	64.08	448.87	7.48	7.42	-0.97
5,059.00	76.50	7.00	4,828.37	478.10	68.04	479.61	9.61	9.38	-2.19
5,091.00	79.30	7.10	4,835.08	509.15	71.88	510.74	8.76	8.75	0.31
5,122.00	81.30	8.00	4,840.30	539.44	75.89	541.12	7.06	6.45	2.90
5,154.00	84.70	8.50	4,844.20	570.86	80.45	572.65	10.74	10.63	1.56
5,185.00	88.30	8.40	4,846.09	601.47	85.00	603.35	11.62	11.61	-0.32
5,225.00	90.50	7.00	4,846.51	641.10	90.35	643.10	6.52	5.50	-3.50
5,320.00	90.80	6.30	4,845.44	735.45	101.36	737.70	0.80	0.32	-0.74
5,415.00	90.90	4.60	4,844.03	830.01	110.38	832.44	1.79	0.11	-1.79
5,510.00	91.60	3.00	4,841.95	924.78	116.67	927.33	1.84	0.74	-1.68
5,604.00	91.40	0.90	4,839.49	1,018.68	119.87	1,021.29	2.24	-0.21	-2.23
5,699.00	91.10	358.80	4,837.42	1,113.65	119.62	1,116.23	2.23	-0.32	-2.21
5,793.00	91.60	358.40	4,835.21	1,207.60	117.32	1,210.09	0.68	0.53	-0.43
5,889.00	90.70	358.60	4,833.28	1,303.55	114.81	1,305.95	0.96	-0.94	0.21
5,984.00	90.80	358.30	4,832.03	1,398.50	112.24	1,400.82	0.33	0.11	-0.32
6,078.00	90.90	357.90	4,830.64	1,492.44	109.13	1,494.65	0.44	0.11	-0.43
6,173.00	90.70	358.50	4,829.31	1,587.39	106.14	1,589.49	0.67	-0.21	0.63
6,267.00	90.20	359.20	4,828.58	1,681.36	104.26	1,683.40	0.92	-0.53	0.74
6,351.00	91.00	359.60	4,827.70	1,765.35	103.38	1,767.34	1.06	0.95	0.48
6,446.00	90.90	359.80	4,826.12	1,860.34	102.88	1,862.29	0.24	-0.11	0.21
6,540.00	91.40	359.80	4,824.23	1,954.32	102.55	1,956.23	0.53	0.53	0.00
6,635.00	91.30	0.20	4,822.00	2,049.29	102.55	2,051.18	0.43	-0.11	0.42
6,730.00	90.40	0.70	4,820.59	2,144.28	103.30	2,146.15	1.08	-0.95	0.53
6,825.00	90.30	0.80	4,820.01	2,239.27	104.54	2,241.14	0.15	-0.11	0.11
6,919.00	90.80	0.50	4,819.10	2,333.26	105.61	2,335.13	0.62	0.53	-0.32
7,014.00	90.80	0.60	4,817.78	2,428.24	106.52	2,430.11	0.11	0.00	0.11

Archer Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well: 926H - Slot 926H
Project:	Eddy County, NM	TVD Reference:	3571' GL+12' KB @ 3583.00usft (Planning)
Site:	Dodd Federal Unit 926H	MD Reference:	3571' GL+12' KB @ 3583.00usft (Planning)
Well:	926H	North Reference:	Grid:
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM.R5000.1 MULTI

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)	
7,108.00	90.80	0.50	4,816.47	2,522.23	107.42	2,524.09	0.11	0.00	-0.11	
7,203.00	90.70	0.50	4,815.22	2,617.22	108.25	2,619.07	0.11	-0.11	0.00	
7,297.00	90.70	0.50	4,814.07	2,711.21	109.07	2,713.05	0.00	0.00	0.00	
7,392.00	91.30	0.40	4,812.42	2,806.19	109.82	2,808.03	0.64	0.63	-0.11	
7,487.00	91.30	0.60	4,810.26	2,901.16	110.64	2,902.99	0.21	0.00	0.21	
7,582.00	91.20	0.50	4,808.19	2,996.13	111.56	2,997.96	0.15	-0.11	-0.11	
7,676.00	91.10	0.50	4,806.30	3,090.11	112.38	3,091.93	0.11	-0.11	0.00	
7,771.00	91.00	359.60	4,804.56	3,185.09	112.46	3,186.88	0.95	-0.11	-0.95	
7,865.00	91.30	1.10	4,802.67	3,279.07	113.03	3,280.85	1.63	0.32	1.60	
7,959.00	91.60	1.20	4,800.30	3,373.02	114.92	3,374.82	0.34	0.32	0.11	
8,054.00	91.70	1.20	4,797.56	3,467.96	116.91	3,469.78	0.11	0.11	0.00	
8,149.00	91.50	1.20	4,794.91	3,562.90	118.90	3,564.74	0.21	-0.21	0.00	
8,244.00	91.30	0.90	4,792.59	3,657.86	120.64	3,659.71	0.38	-0.21	-0.32	
8,338.00	91.00	1.20	4,790.70	3,751.82	122.36	3,753.69	0.45	-0.32	0.32	
8,433.00	91.20	1.10	4,788.88	3,846.79	124.27	3,848.67	0.24	0.21	-0.11	
8,527.00	91.20	1.30	4,786.91	3,940.75	126.23	3,942.65	0.21	0.00	0.21	
8,622.00	90.90	1.60	4,785.17	4,035.70	128.64	4,037.63	0.45	-0.32	0.32	
8,717.00	89.90	359.90	4,784.50	4,130.68	129.88	4,132.62	2.08	-1.05	-1.79	
8,811.00	90.60	359.40	4,784.09	4,224.68	129.31	4,226.57	0.92	0.74	-0.53	
8,906.00	90.20	359.40	4,783.43	4,319.67	128.31	4,321.51	0.42	-0.42	0.00	
9,001.00	90.00	358.90	4,783.26	4,414.66	126.90	4,416.44	0.57	-0.21	-0.53	
9,095.00	91.20	0.60	4,782.28	4,508.65	126.49	4,510.39	2.21	1.28	1.81	
9,190.00	90.90	0.30	4,780.54	4,603.63	127.24	4,605.36	0.45	-0.32	-0.32	
9,285.00	90.80	359.60	4,779.13	4,698.62	127.15	4,700.32	0.74	-0.11	-0.74	
9,380.00	90.60	359.40	4,777.97	4,793.61	126.33	4,795.26	0.30	-0.21	-0.21	
9,474.00	91.10	359.40	4,776.57	4,887.59	125.34	4,889.20	0.53	0.53	0.00	
9,569.00	91.10	359.30	4,774.75	4,982.57	124.26	4,984.12	0.11	0.00	-0.11	
9,663.00	91.30	359.30	4,772.78	5,076.54	123.12	5,078.04	0.21	0.21	0.00	
9,758.00	91.10	1.10	4,770.79	5,171.52	123.45	5,172.99	1.91	-0.21	1.89	
9,852.00	91.60	1.50	4,768.58	5,265.47	125.58	5,266.96	0.68	0.53	0.43	
9,906.00	91.60	1.30	4,767.07	5,319.43	126.90	5,320.94	0.37	0.00	-0.37	
9,951.00	91.60	1.30	4,765.81	5,364.40	127.92	5,365.92	0.00	0.00	0.00	

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										
Dodd 926H Surface	0.00	0.01	0.00	0.00	0.00	664,669.50	584,982.90	32° 49' 37.05 N	104° 3' 24.04 W	
- actual wellpath hits target center										
- Point										
Dodd 926H BHL	0.00	0.00	4,765.81	5,364.40	127.92	670,033.91	585,110.82	32° 50' 30.13 N	104° 3' 22.38 W	
- actual wellpath hits target center										
- Point										