NMOCD
Hobbs

HOBBS OCD

AUG 29 2016

RECEIVED

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. NMNM19859

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No. NMNM135942

2. Name of Operator COG OPERATING LLC — Contact: STORMI DAVIS

8. Lease Name and Well No. MONET FEDERAL COM 10H

3. Address ONE CONCHO CENTER 600 W ILLINOIS AVENUE MIDLAND, TX 79701-4287

3a. Phone No. (include area code) Ph: 575.748.6946

9. API Well No. 30-025-42767-00-S1

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
At surface Sec 4 T25S R33E Mer NMP Lot 4 190FNL 410FWL
At top prod interval reported below Sec 4 T25S R33E Mer NMP
At total depth SWSW 341FSL 405FWL

10. Field and Pool, or Exploratory RED HILLS-UPPER BONE SPRING

11. Sec., T., R., M., or Block and Survey or Area Sec 4 T25S R33E Mer NMP

12. County or Parish LEA

13. State NM

14. Date Spudded 01/04/2016

15. Date T.D. Reached 02/01/2016

16. Date Completed ☐ D & A ☒ Ready to Prod. 06/01/2016

17. Elevations (DF, KB, RT, GL)* 3465 GL

18. Total Depth: MD 13797 TVD 9380

19. Plug Back T.D.: MD 13619 TVD 9380

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each) NONE

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

23. Casing and Liner Record *(Report all strings set in well)*

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375 J-55	54.5	0	1224		850		0	
12.250	9.625 J-55	40.0	0	5080		1200		0	
8.750	5.500 P-110	17.0	0	13776		2150		0	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	8828	8810						

25. Producing Intervals / 26. Perforation Record

	Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A)	BONE SPRING	9553	13616	9553 TO 13616	0.000	972	OPEN - Bone Spring
B)							
C)							
D)							

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
9553 TO 13616	SEE ATTACHED

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
06/01/2016	06/11/2016	24	→	815.0	1435.0	1410.0			FLOWS FROM WELL

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
30/64	980	1450.0	→	815	1435	1410	1761	POW

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

ACCEPTED FOR RECORD
/S/ DAVID R. GLASS
AUG 24 2016

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #343071 VERIFIED BY THE BLM WELL INFORMATION SYSTEM
**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

DAVID R. GLASS
PETROLEUM ENGINEER

RECLAMATION DUE:
DEC 01 2016

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
RUSTLER	1150	1448		RUSTLER	1150
DELAWARE	5081	5126		TOP OF SALT	1448
BELL CANYON	5127	6082		BASE OF SALT	4842
CHERRY CANYON	6083	7539		DELAWARE	5081
BRUSHY CANYON	7540	9116		BELL CANYON	5127
BONE SPRING LIME	9117	10059		CHERRY CANYON	6083
BONE SPRING 1ST	10060	10657		BRUSHY CANYON	7540
BONE SPRING 2ND	10658	11822		BONE SPRING LIME	9117
BONE SPRING 3RD	11823	12700		BONE SPRING 1ST	10060

32. Additional remarks (include plugging procedure):
Surveys & perfs/stimulation are attached.

Additional Tops:
2nd Bone Spring 10658'
3rd Bone Spring 11823'

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)
2. Geologic Report
3. DST Report
4. Directional Survey
5. Sundry Notice for plugging and cement verification
6. Core Analysis
7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #343071 Verified by the BLM Well Information System.
For COG OPERATING LLC, sent to the Hobbs
Committed to AFMSS for processing by DEBORAH HAM on 07/18/2016 (16DMH0167SE)

Name *(please print)* STORMI DAVIS Title REGULATORY ANALYST

Signature (Electronic Submission) Date 06/24/2016

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 fradulent statements or representations as to any matter within its jurisdiction.

**** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ****

Monet Federal Com #10H

30-025-42767
Sec 4-T25S-R33E

Perfs			7 1/2% Acid (Gal)	Sand (#)	Fluid (Gal)
13616	13569	13518	2016	300044	309498
13467	13417	13366	3024	300993	281106
13320	13264	13213	3024	299432	282660
13162	13112	13061	3024	301991	280938
13010	12955	12908	3024	302066	276108
12857	12807	12756	3024	299023	281988
12705	12654	12606	5754	319443	521850
12552	12502	12451	3024	300459	279888
12400	12349	12298	3024	301730	282702
12247	12193	12146	3024	301354	282828
12095	12044	11993	3066	300240	278964
11942	11892	11483	2982	301107	273000
11790	11739	11688	3024	302088	272580
11637	11586	11536	3024	300795	279006
11485	11431	11383	3024	300126	380562
11332	11281	11231	3024	299919	388416
11180	11129	11072	3024	300631	275646
11027	10976	10926	3024	301162	274848
10875	10824	10773	3024	298661	270186
10721	10670	10621	3024	300138	273462
10570	10519	10468	3024	300088	277158
10417	10361	10316	3024	311975	280518
10265	10214	10163	3024	312378	285684
10112	10061	10013	3024	312900	277788
9959	9909	9858	3024	309459	280140
9807	9756	9705	3024	310802	282534
9657	9603	9553	3024	304856	277914
		Totals	83370	8193860	8007972

McVAY DRILLING COMPANY
P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

Well Name and Num: Monet Federal Com # 10 H
Location: Sec 4, T25S, R33E
Operator: COG
Drilling Contractor: McVay Drilling Company

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

Degrees @	Depth	Degrees @	Depth	Degrees @	Depth	Degrees @	Depth
0.10	258	2.70	5250	1.00	11077	89.40	13230
0.60	606	1.90	5744	1.70	11460	90.70	13513
1.70	956	2.00	5991	1.80	11845	91.60	13708
1.70	1144	1.40	6300	1.90	12512		
1.40	1344	1.70	6619	1.90	12652		
1.60	1593	0.80	7127	1.20	8819		
0.10	1848	0.90	7381	34.70	9138		
1.20	2088	1.60	7731	58.80	9393		
0.70	2352	1.30	8139	89.90	9744		
1.20	2603	1.10	8649	89.90	10188		
0.70	2854	1.70	8901	90.20	10570		
0.70	3106	1.90	9314	89.30	10953		
0.60	3582	2.30	9600	89.70	11332		
0.90	3772	1.50	9916	88.60	11807		
1.20	4149	1.20	10201	90.60	12228		
3.70	4718	1.30	10487	90.90	12470		
2.90	5010	2.10	10869	89.30	12945		

By: Mark A. Canon

Subscribed and sworn to before me this 3rd day of February, 2016

Tina Flemens
Notary Public, Lea County, New Mexico

OFFICIAL SEAL
TINA FLEMENS
Notary Public
State of New Mexico
My Comm. Expires 8.16.17

VES SURVEY INTERNATIONAL

January 20, 2016

HOBBS OCD
AUG 2 9 2016

HOBBS OCD
AUG 2 9 2016
RECEIVED

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

Attn: Kanicia Castillo

RE: **Monet Federal Com No 010H**

Please find enclosed a copy of the survey from 0' to 9553' ran on the above referenced well.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
§
COUNTY OF NUECES §

This instrument was acknowledged before me on the 20 day of January A.D., 2016, by Keith Havelka.

Jennifer Ann Byerly
Notary Public, State of Texas

JENNIFER ANN BYERLY
Notary Public, State of Texas
My Commission Expires
August 16, 2017

VES Survey International
P.O. Box 261021, Corpus Christi, Texas 78426
T (361) 767-0602 F (361) 767-0612
www.vessurvey.com

Company: Concho
Lease/Well: Monet Federal Com No/010H

Rig Name: McVay 7
State/County: New Mexico/Lea
VS-Azi: 0.00 Degrees
Latitude: 32.16622, Longitude: -103.58397
Grid North = True North -0.40 degs (NAD 27)
Grid Correction Applied = -0.40 degs

VES SURVEY INTERNATIONAL

Depth Reference : RKB = 17 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS
Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 1/20/2016 / 14:18

VES Survey International
Midland,TX
(432)-563-5444
Surveyor: Andy Askew
Monet Federal Com No 010H / API 30-025-42767

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	0.60	338.68	100.00	0.49	-0.19	0.49	0.53	338.68	0.60
200.00	0.24	296.96	200.00	1.08	-0.57	1.08	1.22	332.19	0.46
300.00	0.20	350.72	299.99	1.34	-0.78	1.34	1.55	329.79	0.20
400.00	0.58	313.48	399.99	1.86	-1.18	1.86	2.20	327.68	0.44
500.00	0.56	303.34	499.99	2.47	-1.95	2.47	3.15	321.77	0.10
600.00	0.74	250.97	599.98	2.53	-2.96	2.53	3.90	310.46	0.60
700.00	0.56	236.60	699.98	2.05	-3.98	2.05	4.48	297.24	0.24
800.00	1.27	234.02	799.96	1.13	-5.28	1.13	5.40	282.12	0.71
900.00	1.70	237.99	899.93	-0.30	-7.43	-0.30	7.44	267.69	0.44
1000.00	2.13	239.64	999.87	-2.02	-10.29	-2.02	10.48	258.88	0.43
1100.00	2.58	245.71	1099.79	-3.88	-13.94	-3.88	14.47	254.43	0.52
1200.00	2.52	245.82	1199.69	-5.71	-17.99	-5.71	18.87	252.39	0.06
1300.00	1.81	240.77	1299.62	-7.38	-21.37	-7.38	22.61	250.95	0.73
1400.00	1.50	243.76	1399.58	-8.73	-23.92	-8.73	25.47	249.95	0.33
1500.00	0.96	241.44	1499.55	-9.71	-25.84	-9.71	27.60	249.40	0.54
1600.00	1.18	250.73	1599.53	-10.45	-27.55	-10.45	29.47	249.22	0.28

V.E.S Survey Date: 1/14/2016

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
1700.00	1.31	268.32	1699.61	-10.83	-29.66	-10.83	31.58	249.95	0.40
1800.00	1.01	251.03	1799.49	-11.15	-31.64	-11.15	33.55	250.59	0.45
1900.00	1.38	277.70	1899.47	-11.28	-33.67	-11.28	35.51	251.48	0.66
2000.00	1.31	280.96	1999.44	-10.90	-35.99	-10.90	37.60	253.15	0.10
2100.00	0.97	286.98	2099.42	-10.43	-37.92	-10.43	39.33	254.62	0.36
2200.00	0.78	279.67	2199.41	-10.07	-39.40	-10.07	40.67	255.66	0.22
2300.00	0.96	272.37	2299.40	-9.92	-40.91	-9.92	42.10	256.37	0.22
2400.00	1.01	287.21	2399.38	-9.63	-42.60	-9.63	43.67	257.27	0.26
2500.00	0.89	306.36	2499.37	-8.91	-44.07	-8.91	44.96	258.57	0.34
2600.00	0.85	304.44	2599.36	-8.03	-45.30	-8.03	46.00	259.95	0.05
2700.00	1.23	315.85	2699.34	-6.84	-46.66	-6.84	47.16	261.66	0.44
2800.00	1.12	345.88	2799.32	-5.11	-47.65	-5.11	47.92	263.87	0.62
2900.00	1.08	352.21	2899.30	-3.23	-48.01	-3.23	48.12	266.15	0.13
3000.00	0.87	339.28	2999.29	-1.60	-48.41	-1.60	48.44	268.11	0.30
3100.00	0.76	329.09	3099.28	-0.32	-49.02	-0.32	49.02	269.62	0.18
3200.00	0.78	343.98	3199.27	0.90	-49.55	0.90	49.55	271.04	0.20
3300.00	0.13	303.84	3299.27	1.62	-49.83	1.62	49.85	271.86	0.69
3400.00	0.28	20.31	3399.27	1.91	-49.84	1.91	49.87	272.20	0.28
3500.00	0.38	190.60	3499.27	1.82	-49.81	1.82	49.84	272.09	0.65
3600.00	0.17	115.03	3599.27	1.44	-49.74	1.44	49.76	271.66	0.37
3700.00	0.33	298.37	3699.27	1.51	-49.86	1.51	49.88	271.74	0.50
3800.00	1.46	54.68	3799.25	2.39	-49.07	2.39	49.13	272.79	1.64
3900.00	1.30	66.99	3899.23	3.57	-46.99	3.57	47.12	274.35	0.34
4000.00	1.38	62.73	3999.20	4.57	-44.87	4.57	45.11	275.81	0.13
4100.00	1.28	77.20	4099.17	5.36	-42.72	5.36	43.06	277.15	0.35
4200.00	1.28	85.83	4199.15	5.69	-40.52	5.69	40.92	277.99	0.19
4300.00	2.23	95.91	4299.10	5.57	-37.47	5.57	37.88	278.46	0.99
4400.00	3.53	107.97	4398.97	4.42	-32.61	4.42	32.91	277.72	1.43
4500.00	3.41	103.91	4498.79	2.76	-26.79	2.76	26.93	275.87	0.27
4600.00	3.87	104.96	4598.59	1.17	-20.64	1.17	20.67	273.24	0.46
4700.00	4.11	109.30	4698.34	-0.89	-14.00	-0.89	14.03	266.37	0.38
4800.00	4.43	114.93	4798.07	-3.70	-7.12	-3.70	8.02	242.54	0.53
4900.00	4.40	118.79	4897.77	-7.17	-0.25	-7.17	7.18	182.02	0.30
5000.00	3.55	119.78	4997.53	-10.56	5.79	-10.56	12.04	151.24	0.86
5100.00	3.34	105.00	5097.35	-12.85	11.29	-12.85	17.11	138.68	0.91
5200.00	3.31	105.93	5197.18	-14.39	16.88	-14.39	22.19	130.45	0.07
5300.00	2.90	108.66	5297.04	-16.00	22.06	-16.00	27.25	125.95	0.43
5400.00	2.33	113.66	5396.93	-17.62	26.32	-17.62	31.67	123.81	0.62
5500.00	2.33	119.15	5496.85	-19.43	29.95	-19.43	35.70	122.97	0.22

V.E.S Survey Date: 1/14/2016

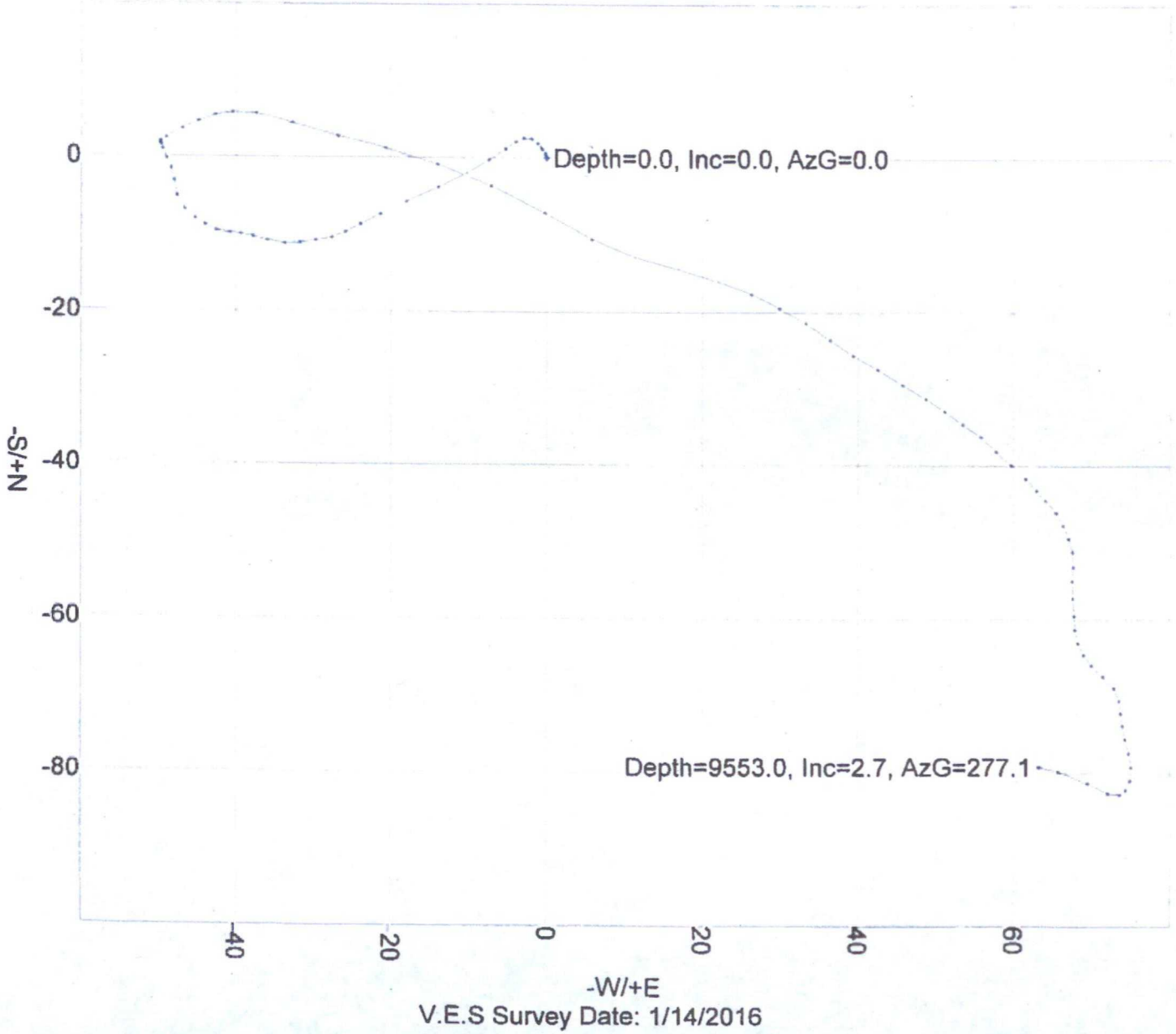
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5600.00	2.18	121.34	5596.77	-21.41	33.35	-21.41	39.63	122.69	0.17
5700.00	2.16	128.39	5696.70	-23.56	36.45	-23.56	43.40	122.88	0.27
5800.00	1.96	119.69	5796.64	-25.58	39.41	-25.58	46.98	122.99	0.37
5900.00	2.19	119.27	5896.57	-27.36	42.56	-27.36	50.59	122.73	0.22
6000.00	2.19	124.65	5996.50	-29.38	45.79	-29.38	54.40	122.68	0.21
6100.00	1.78	118.05	6096.44	-31.19	48.73	-31.19	57.86	122.62	0.47
6200.00	1.64	132.20	6196.39	-32.88	51.16	-32.88	60.81	122.73	0.44
6300.00	1.62	119.96	6296.35	-34.55	53.44	-34.55	63.64	122.88	0.35
6400.00	1.70	129.73	6396.31	-36.20	55.80	-36.20	66.52	122.97	0.29
6500.00	1.49	138.79	6496.27	-38.12	57.80	-38.12	69.24	123.41	0.32
6600.00	1.49	128.80	6596.24	-39.91	59.67	-39.91	71.79	123.78	0.26
6700.00	1.48	136.19	6696.21	-41.66	61.58	-41.66	74.35	124.08	0.19
6800.00	0.86	144.12	6796.18	-43.20	62.91	-43.20	76.32	124.48	0.64
6900.00	1.21	134.96	6896.17	-44.55	64.09	-44.55	78.06	124.80	0.39
7000.00	1.10	145.42	6996.15	-46.09	65.39	-46.09	80.00	125.18	0.24
7100.00	1.12	159.11	7096.13	-47.79	66.28	-47.79	81.71	125.79	0.27
7200.00	0.95	153.98	7196.11	-49.45	66.99	-49.45	83.26	126.43	0.19
7300.00	1.16	172.55	7296.10	-51.20	67.49	-51.20	84.71	127.19	0.40
7400.00	1.02	184.42	7396.08	-53.09	67.55	-53.09	85.92	128.17	0.27
7500.00	1.12	183.46	7496.06	-54.95	67.42	-54.95	86.98	129.18	0.10
7600.00	1.47	173.39	7596.04	-57.20	67.51	-57.20	88.49	130.27	0.42
7700.00	1.16	177.91	7696.01	-59.49	67.70	-59.49	90.12	131.31	0.33
7800.00	0.93	174.98	7795.99	-61.31	67.81	-61.31	91.42	132.12	0.24
7900.00	1.14	164.77	7895.98	-63.08	68.14	-63.08	92.85	132.79	0.28
8000.00	0.86	139.41	7995.96	-64.61	68.89	-64.61	94.44	133.17	0.52
8100.00	1.09	144.34	8095.95	-65.95	69.93	-65.95	96.12	133.32	0.25
8200.00	1.30	126.56	8195.92	-67.40	71.39	-67.40	98.18	133.35	0.42
8300.00	1.16	149.07	8295.90	-68.94	72.82	-68.94	100.28	133.43	0.50
8400.00	0.94	173.42	8395.89	-70.62	73.43	-70.62	101.88	133.88	0.49
8500.00	0.87	167.36	8495.87	-72.18	73.69	-72.18	103.15	134.41	0.12
8600.00	1.04	177.24	8595.86	-73.83	73.90	-73.83	104.47	134.97	0.24
8700.00	0.99	160.16	8695.84	-75.55	74.24	-75.55	105.92	135.50	0.31
8800.00	1.18	172.12	8795.83	-77.38	74.67	-77.38	107.54	136.02	0.30
8900.00	0.97	166.49	8895.81	-79.23	75.01	-79.23	109.10	136.56	0.23
9000.00	1.12	198.60	8995.79	-80.97	74.90	-80.97	110.30	137.23	0.59
9100.00	0.48	217.15	9095.78	-82.23	74.34	-82.23	110.85	137.88	0.68
9200.00	0.68	244.24	9195.78	-82.82	73.55	-82.82	110.76	138.39	0.34
9300.00	1.21	293.12	9295.77	-82.67	72.04	-82.67	109.65	138.93	0.92
9400.00	2.17	299.66	9395.72	-81.32	69.43	-81.32	106.92	139.51	0.98

V.E.S Survey Date: 1/14/2016

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
9500.00	2.60	286.09	9495.64	-79.75	65.61	-79.75	103.27	140.56	0.71
9553.00	2.66	277.10	9548.58	-79.27	63.23	-79.27	101.40	141.42	0.78

V.E.S Survey Date: 1/14/2016

VES Survey International
Midland,TX
(432)-563-5444
Surveyor: Andy Askew
Monet Federal Com No 010H / API 30-025-42767



V.E.S Survey Date: 1/14/2016

VES SURVEY INTERNATIONAL

I Andy Askew certify that I am employed by VES Survey International. That I did on the day(s) of 01/15/16 through 01/15/16 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 9,553.00 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Concho for the Monet Federal Com Well # 10H API # 30-025-42767 in Lea County / Parish New Mexico ; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Vaughn Energy Services

Andy Askew
Service Technician
Vaughn Energy Services

CONCHO

COG Operating, LLC

Lea County, NM
Sec 4, T25S, R33E
Monet Federal #10H

Curve & Lateral

Survey: MWD

Survey Report - Geographic

03 February, 2016

DDC
The DIRECTIONAL DRILLING COMPANY

Company:	COG Operating, LLC	**Local Co-ordinate Reference:**	Well Monet Federal #10H
Project:	Lea County, NM	**TVD Reference:**	well @ 3481.0usft (McVay #7)
Site:	Sec 4, T25S, R33E	**MD Reference:**	well @ 3481.0usft (McVay #7)
Well:	Monet Federal #10H	**North Reference:**	Grid
Wellbore:	Curve & Lateral	**Survey Calculation Method:**	Minimum Curvature
Design:	Curve & Lateral	**Database:**	EDM 5000.1 Single User Db

Project Lea 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 Sec 4, T25S, R33E

Site Position:		**Northing:**	424,999.76 usft	**Latitude:**	32° 9' 58.399 N
From:	Lat/Long	**Easting:**	731,880.25 usft	**Longitude:**	103° 35' 2.306 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.40 °

Well Monet Federal #10H

Well Position	**+N/-S**	0.0 usft	**Northing:**	424,999.90 usft	**Latitude:**	32° 9' 58.401 N
	+E/-W	0.0 usft	**Easting:**	731,880.20 usft	**Longitude:**	103° 35' 2.307 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,464.0 usft

Wellbore Curve & Lateral

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/4/2016	7.11	60.03	48,051

Design Curve & Lateral

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	8,800.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.90

Survey Program **Date** 2/3/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	8,800.0	Gyro (Pilot Hole)	Good_gyro	Good Gyro
8,800.0	13,797.0	MWD (Curve & Lateral)	MWD default	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,800.0	1.18	172.12	8,795.8	-77.4	74.7	424,922.52	731,954.87	32° 9' 57.630 N	103° 35' 1.445 W
First MWD Survey @ 8800' MD / 8795' TVD									
8,819.0	1.20	180.00	8,814.8	-77.8	74.7	424,922.13	731,954.89	32° 9' 57.626 N	103° 35' 1.444 W
8,850.0	2.40	184.40	8,845.8	-78.7	74.6	424,921.15	731,954.84	32° 9' 57.616 N	103° 35' 1.445 W
8,882.0	5.50	186.90	8,877.7	-80.9	74.4	424,918.96	731,954.61	32° 9' 57.594 N	103° 35' 1.448 W
8,914.0	10.10	185.70	8,909.4	-85.3	73.9	424,914.65	731,954.14	32° 9' 57.552 N	103° 35' 1.454 W
8,946.0	15.60	182.80	8,940.8	-92.3	73.5	424,907.55	731,953.66	32° 9' 57.482 N	103° 35' 1.460 W
8,978.0	19.70	182.80	8,971.1	-102.0	73.0	424,897.86	731,953.18	32° 9' 57.386 N	103° 35' 1.466 W
9,010.0	23.60	184.60	9,000.8	-113.8	72.2	424,886.09	731,952.40	32° 9' 57.269 N	103° 35' 1.476 W
9,042.0	27.10	185.50	9,029.8	-127.5	71.0	424,872.44	731,951.19	32° 9' 57.134 N	103° 35' 1.491 W

Company:	COG Operating, LLC	**Local Co-ordinate Reference:**	Well Monet Federal #10H
Project:	Lea County, NM	**TVD Reference:**	well @ 3481.0usft (McVay #7)
Site:	Sec 4, T25S, R33E	**MD Reference:**	well @ 3481.0usft (McVay #7)
Well:	Monet Federal #10H	**North Reference:**	Grid
Wellbore:	Curve & Lateral	**Survey Calculation Method:**	Minimum Curvature
Design:	Curve & Lateral	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,067.8	29.28	185.17	9,052.5	-139.6	69.9	424,860.31	731,950.06	32° 9' 57.014 N	103° 35' 1.506 W
Crossed 330' Hard Line @ 9068' MD / 9053' TVD									
9,074.0	29.80	185.10	9,057.9	-142.6	69.6	424,857.26	731,949.78	32° 9' 56.984 N	103° 35' 1.509 W
9,106.0	32.00	184.90	9,085.3	-159.0	68.2	424,840.89	731,948.35	32° 9' 56.822 N	103° 35' 1.527 W
9,138.0	34.70	184.90	9,112.1	-176.5	66.7	424,823.37	731,946.85	32° 9' 56.649 N	103° 35' 1.546 W
9,170.0	38.40	184.80	9,137.8	-195.5	65.0	424,804.38	731,945.24	32° 9' 56.461 N	103° 35' 1.566 W
9,202.0	42.30	184.10	9,162.2	-216.2	63.4	424,783.73	731,943.64	32° 9' 56.257 N	103° 35' 1.586 W
9,233.0	45.10	184.80	9,184.6	-237.5	61.8	424,762.38	731,941.97	32° 9' 56.046 N	103° 35' 1.608 W
9,265.0	47.60	185.10	9,206.6	-260.6	59.8	424,739.31	731,939.98	32° 9' 55.818 N	103° 35' 1.633 W
9,297.0	50.30	184.60	9,227.7	-284.6	57.7	424,715.27	731,937.94	32° 9' 55.580 N	103° 35' 1.658 W
9,329.0	53.30	185.10	9,247.4	-309.7	55.6	424,690.22	731,935.81	32° 9' 55.332 N	103° 35' 1.685 W
9,361.0	56.10	184.80	9,265.9	-335.7	53.4	424,664.20	731,933.56	32° 9' 55.075 N	103° 35' 1.713 W
9,393.0	58.80	184.30	9,283.2	-362.6	51.2	424,637.31	731,931.42	32° 9' 54.809 N	103° 35' 1.741 W
9,425.0	61.50	184.30	9,299.1	-390.3	49.1	424,609.64	731,929.34	32° 9' 54.535 N	103° 35' 1.767 W
9,457.0	64.70	184.30	9,313.6	-418.7	47.0	424,581.19	731,927.20	32° 9' 54.254 N	103° 35' 1.794 W
9,489.0	68.50	183.40	9,326.3	-448.0	45.0	424,551.89	731,925.23	32° 9' 53.964 N	103° 35' 1.819 W
9,521.0	71.70	182.50	9,337.2	-478.1	43.5	424,521.85	731,923.69	32° 9' 53.667 N	103° 35' 1.840 W
9,553.0	75.20	183.20	9,346.3	-508.7	42.0	424,491.21	731,922.16	32° 9' 53.364 N	103° 35' 1.860 W
9,584.0	78.00	184.90	9,353.5	-538.8	39.8	424,461.14	731,920.03	32° 9' 53.066 N	103° 35' 1.887 W
9,616.0	80.90	185.30	9,359.3	-570.1	37.0	424,429.81	731,917.23	32° 9' 52.757 N	103° 35' 1.922 W
9,649.0	84.00	187.10	9,363.6	-602.6	33.5	424,397.29	731,913.70	32° 9' 52.435 N	103° 35' 1.966 W
9,681.0	87.10	187.20	9,366.1	-634.3	29.5	424,365.64	731,909.72	32° 9' 52.122 N	103° 35' 2.015 W
9,713.0	89.20	186.50	9,367.2	-666.0	25.7	424,333.88	731,905.91	32° 9' 51.808 N	103° 35' 2.062 W
9,744.0	89.90	186.50	9,367.4	-696.8	22.2	424,303.09	731,902.40	32° 9' 51.504 N	103° 35' 2.105 W
9,807.0	89.00	185.30	9,368.0	-759.5	15.7	424,240.42	731,895.93	32° 9' 50.884 N	103° 35' 2.186 W
9,902.0	89.30	184.40	9,369.4	-854.1	7.7	424,145.78	731,887.89	32° 9' 49.948 N	103° 35' 2.287 W
9,998.0	90.50	184.60	9,369.6	-949.8	0.2	424,050.07	731,880.36	32° 9' 49.001 N	103° 35' 2.382 W
10,092.0	90.30	182.50	9,368.9	-1,043.6	-5.7	423,956.26	731,874.54	32° 9' 48.073 N	103° 35' 2.457 W
10,188.0	89.80	181.10	9,368.8	-1,139.6	-8.7	423,860.31	731,871.53	32° 9' 47.124 N	103° 35' 2.500 W
10,283.0	89.30	179.10	9,369.6	-1,234.6	-8.8	423,765.32	731,871.36	32° 9' 46.184 N	103° 35' 2.510 W
10,379.0	90.80	179.00	9,369.5	-1,330.6	-7.2	423,669.34	731,872.95	32° 9' 45.234 N	103° 35' 2.499 W
10,475.0	89.40	177.60	9,369.3	-1,426.5	-4.4	423,573.38	731,875.80	32° 9' 44.285 N	103° 35' 2.474 W
10,570.0	90.20	177.40	9,369.7	-1,521.4	-0.3	423,478.47	731,879.94	32° 9' 43.345 N	103° 35' 2.433 W
10,666.0	91.10	177.80	9,368.6	-1,617.3	3.8	423,382.57	731,883.96	32° 9' 42.396 N	103° 35' 2.394 W
10,762.0	91.50	177.40	9,366.4	-1,713.2	7.8	423,286.68	731,887.98	32° 9' 41.447 N	103° 35' 2.355 W
10,857.0	90.40	177.90	9,364.8	-1,808.1	11.7	423,191.77	731,891.88	32° 9' 40.507 N	103° 35' 2.318 W
10,953.0	89.30	179.00	9,365.1	-1,904.1	14.3	423,095.81	731,894.48	32° 9' 39.557 N	103° 35' 2.295 W
11,049.0	89.20	179.10	9,366.3	-2,000.1	15.9	422,999.83	731,896.07	32° 9' 38.607 N	103° 35' 2.284 W
11,142.0	90.20	178.80	9,366.8	-2,093.1	17.6	422,906.85	731,897.77	32° 9' 37.687 N	103° 35' 2.272 W
11,237.0	89.00	179.50	9,367.5	-2,188.0	19.0	422,811.86	731,899.18	32° 9' 36.747 N	103° 35' 2.263 W
11,332.0	89.70	179.70	9,368.6	-2,283.0	19.6	422,716.87	731,899.84	32° 9' 35.807 N	103° 35' 2.263 W
11,427.0	90.60	179.50	9,368.3	-2,378.0	20.3	422,621.88	731,900.51	32° 9' 34.867 N	103° 35' 2.263 W
11,522.0	89.10	181.10	9,368.6	-2,473.0	19.8	422,526.88	731,900.01	32° 9' 33.927 N	103° 35' 2.277 W
11,617.0	89.50	181.30	9,369.7	-2,568.0	17.8	422,431.91	731,898.02	32° 9' 32.987 N	103° 35' 2.308 W
11,712.0	90.30	180.90	9,369.9	-2,663.0	16.0	422,336.93	731,896.20	32° 9' 32.048 N	103° 35' 2.337 W
11,807.0	88.60	181.30	9,370.8	-2,757.9	14.2	422,241.96	731,894.37	32° 9' 31.108 N	103° 35' 2.365 W
11,902.0	89.20	181.10	9,372.6	-2,852.9	12.2	422,146.99	731,892.38	32° 9' 30.168 N	103° 35' 2.396 W
11,997.0	88.60	180.60	9,374.5	-2,947.9	10.8	422,052.02	731,890.97	32° 9' 29.229 N	103° 35' 2.420 W
12,092.0	91.00	181.80	9,374.8	-3,042.8	8.8	421,957.05	731,888.98	32° 9' 28.289 N	103° 35' 2.451 W
12,187.0	89.60	181.30	9,374.3	-3,137.8	6.2	421,862.09	731,886.42	32° 9' 27.350 N	103° 35' 2.489 W
12,281.0	90.60	182.10	9,374.1	-3,231.8	3.4	421,768.14	731,883.63	32° 9' 26.420 N	103° 35' 2.529 W
12,375.0	88.20	179.70	9,375.1	-3,325.7	2.0	421,674.17	731,882.15	32° 9' 25.490 N	103° 35' 2.554 W
12,470.0	90.90	179.10	9,375.9	-3,420.7	2.9	421,579.18	731,883.14	32° 9' 24.550 N	103° 35' 2.550 W
12,565.0	90.10	179.50	9,375.0	-3,515.7	4.1	421,484.19	731,884.31	32° 9' 23.610 N	103° 35' 2.544 W
12,660.0	89.90	179.00	9,375.0	-3,610.7	5.4	421,389.20	731,885.55	32° 9' 22.670 N	103° 35' 2.537 W

Company:	COG Operating, LLC	**Local Co-ordinate Reference:**	Well Monet Federal #10H
Project:	Lea County, NM	**TVD Reference:**	well @ 3481.0usft (McVay #7)
Site:	Sec 4, T25S, R33E	**MD Reference:**	well @ 3481.0usft (McVay #7)
Well:	Monet Federal #10H	**North Reference:**	Grid
Wellbore:	Curve & Lateral	**Survey Calculation Method:**	Minimum Curvature
Design:	Curve & Lateral	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
12,755.0	91.10	179.90	9,374.2	-3,705.7	6.3	421,294.21	731,886.46	32° 9' 21.730 N	103° 35' 2.534 W
12,850.0	89.40	179.50	9,373.8	-3,800.7	6.8	421,199.22	731,886.96	32° 9' 20.790 N	103° 35' 2.536 W
12,945.0	89.30	178.80	9,374.9	-3,895.7	8.2	421,104.24	731,888.37	32° 9' 19.850 N	103° 35' 2.527 W
13,040.0	88.60	178.40	9,376.4	-3,990.6	10.5	421,009.28	731,890.69	32° 9' 18.910 N	103° 35' 2.508 W
13,135.0	88.50	177.40	9,378.7	-4,085.5	14.0	420,914.37	731,894.17	32° 9' 17.971 N	103° 35' 2.475 W
13,230.0	89.40	177.90	9,380.4	-4,180.4	17.9	420,819.47	731,898.06	32° 9' 17.031 N	103° 35' 2.438 W
13,323.0	90.60	178.40	9,380.4	-4,273.4	20.9	420,726.52	731,901.07	32° 9' 16.111 N	103° 35' 2.410 W
13,418.0	91.20	178.80	9,378.9	-4,368.3	23.2	420,631.56	731,903.39	32° 9' 15.171 N	103° 35' 2.391 W
13,513.0	90.70	179.00	9,377.3	-4,463.3	25.0	420,536.59	731,905.21	32° 9' 14.232 N	103° 35' 2.378 W
13,608.0	90.80	178.40	9,376.1	-4,558.3	27.2	420,441.62	731,907.36	32° 9' 13.292 N	103° 35' 2.360 W
13,708.0	91.60	178.60	9,374.0	-4,658.2	29.8	420,341.68	731,909.98	32° 9' 12.302 N	103° 35' 2.338 W
13,747.0	91.70	178.10	9,372.9	-4,697.2	30.9	420,302.71	731,911.10	32° 9' 11.917 N	103° 35' 2.328 W
13,797.0	91.70	178.10	9,371.4	-4,747.1	32.6	420,252.76	731,912.76	32° 9' 11.422 N	103° 35' 2.313 W
TD @ 13797' MD / 9371' TVD									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
8,800.0	8,795.8	-77.4	74.7	First MWD Survey @ 8800' MD / 8795' TVD
9,067.8	9,052.5	-139.6	68.9	Crossed 330' Hard Line @ 9068' MD / 9053' TVD
13,797.0	9,371.4	-4,747.1	32.6	TD @ 13797' MD / 9371' TVD

Checked By: _____ Approved By: _____ Date: _____

Company Name: COG Operating, LLC
Monet Federal #10H
Lea County, NM
Rig: McVay #7
Created By: Will Jirsik
Date: 3/3/2016

Monet Federal #10H
Lea County, NM
Q160003 & WT-160005
Target Change #1

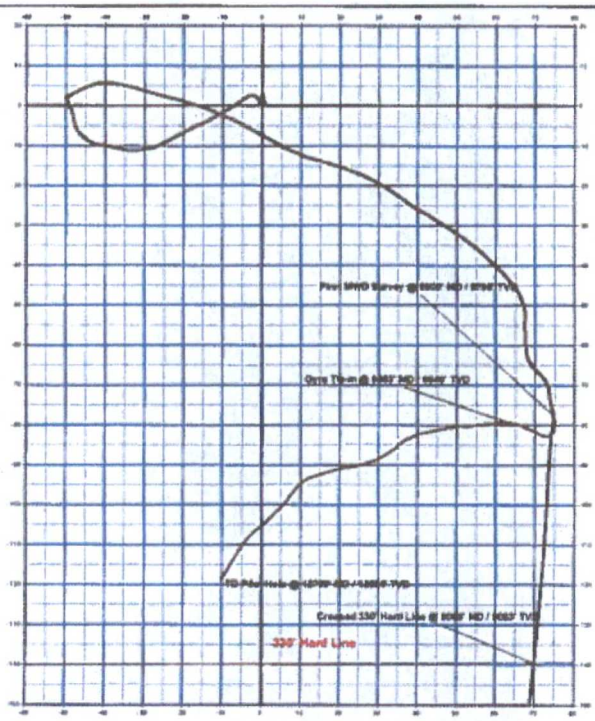
PROJECT DETAILS:	Lea County, NM
Geodetic System:	US State Plane 1927 (Exact solution)
Datum:	NAD 1927 (NADCON CONUS)
Ellipsoid:	Clarke 1866
Zone:	New Mexico East 3001
System Datum:	Mean Sea Level

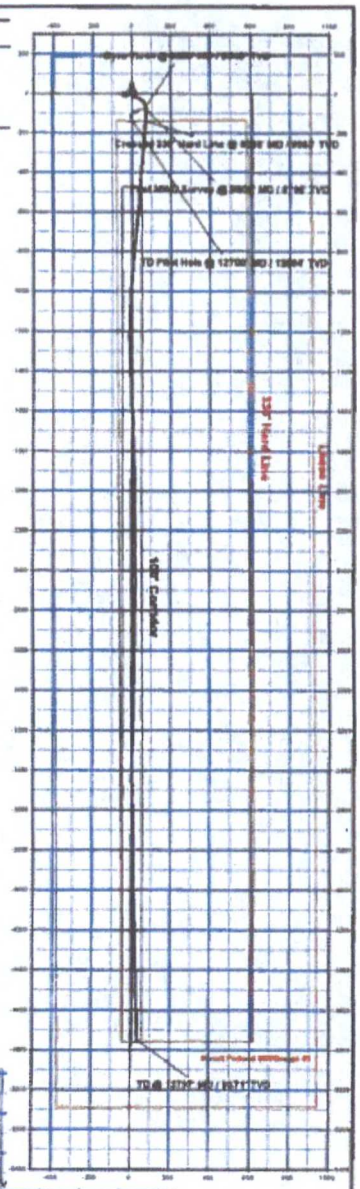
CURVE & LATERAL ANNOTATIONS

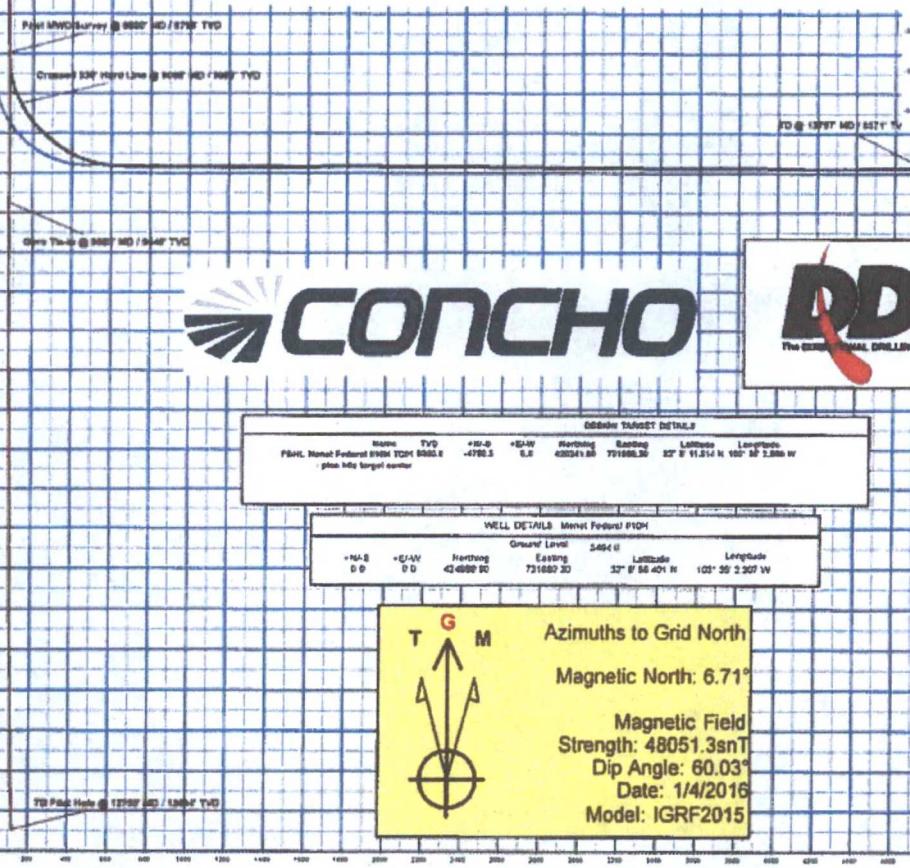
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
9988.8	1.10	172.13	8784.8	-77.4	74.7	77.8	228.2	Pilot MWD Survey @ 8880' MD / 8798' TVD
10067.2	35.20	180.17	9065.5	-130.0	80.2	136.7	231.2	Crossed 330' Hard Line @ 9068' MD / 9065' TVD
12797.0	91.70	179.10	8871.0	-4747.2	83.0	4747.2	9083.5	TD @ 12797' MD / 8871' TVD

PILOT ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
9983.0	3.80	277.10	9648.8	-70.3	61.3	70.4	240.1	Gyro Tie-In @ 9880' MD / 9648' TVD
12784.0	1.30	215.00	13084.2	-110.0	-10.1	110.0	330.0	TD Pilot Hole @ 12798' MD / 13084' TVD







CONCHO

DDC
The DIRECTIONAL DRILLING COMPANY

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL Monet Federal #10H TGM plus 100' target center	9065.0	-4798.5	6.0	428341.80	731680.30	32° 8' 51.514 N	103° 35' 2.888 W

WELL DETAILS Monet Federal #10H

+N/-S	+E/-W	Northing	Easting	Ground Level	Latitude	Longitude
0.0	0.0	423699.90	731680.30	3464.0	32° 8' 56.401 N	103° 35' 2.207 W

Azimuths to Grid North

Magnetic North: 6.71°

Magnetic Field
Strength: 48051.3snT
Dip Angle: 60.03°
Date: 1/4/2016
Model: IGRF2015

Vertical Section at 179.90° (200 usft/in)