

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NMNM057239

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other			6. If Indian, Allottee or Tribe Name		
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other _____			7. Unit or CA Agreement Name and No.		
2. Name of Operator COG OPERATING LLC			8. Lease Name and Well No. LIZARD POT FEDERAL 5H		
3. Address 2208 W MAIN ST ARTESIA, NM 88210			9. API Well No. 30-015-42455		
4. Location of Well (Report location clearly and in accordance with Federal requirements)* Sec 36 T19S R31E Mer NMP At surface NWSE 1650FSL 2210FEL At top prod interval reported below Sec 1 T20S R31E Mer NMP At total depth SWSE 1650FSL 2210FEL			10. Field and Pool, or Exploratory WC WILLIAMS SINK; BS		
11. Sec., T., R., M., or Block and Survey or Area Sec 36 T19S R31E Mer NMP			12. County or Parish EDDY		
13. State NM			17. Elevations (DF, KB, RT, GL)* 3485 GL		
14. Date Spudded 11/07/2014		15. Date T.D. Reached 12/02/2014		16. Date Completed ☐ D & A ☒ Ready to Prod. 01/30/2015	
18. Total Depth: MD 15620 TVD 9398		19. Plug Back T.D.: MD 15562 TVD 9396		20. Depth Bridge Plug Set: MD 15562 TVD 9396	
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 Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
26.000	20.000 J55	94.0	0	946		1300		0	
17.500	13.375 J55	54.5	0	2710		2050		0	
12.250	9.625 J55	40.0	0	4310	3012	1700		0	
8.750	5.500 P110	17.0	0	15615		2950		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	8860							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) BONE SPRING	11091	15522	11091 TO 15462	0.460	576	OPEN
B)			15512 TO 15522		60	OPEN
C)						
D)						

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

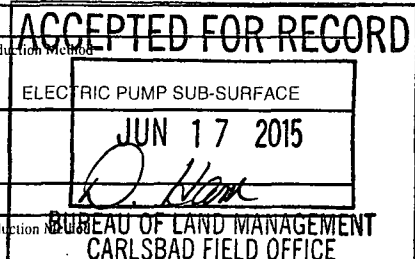
Depth Interval	Amount and Type of Material
11091 TO 15462	SEE IN REMARKS

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
02/02/2015	02/09/2015	24	→	802.0	705.0	1428.0			ELECTRIC PUMP SUB-SURFACE
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
SI	370	160.0	→	802	705	1428		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.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
SI			→						



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

ELECTRONIC SUBMISSION #292662 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

Reclamation
Date: 8/9/15

OB

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	Thg. 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	Thg. 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
CHERRY CANYON	4342	5517		RUSTLER	813
BRUSHY CANYON	5518	7213		TOS	892
BONE SPRING LM	7214	8396		BOS	2667
1ST BONE SPRING	8397	8186		CHERRY CANYON	4342
2ND BONE SPRING	9187	9398		BRUSHY CANYON	5518
				BONE SPRING LM	7214
				1ST BONE SPRING	8397
				2ND BONE SPRING	9187

32. Additional remarks (include plugging procedure):

Perfs 7 1/2" Sand (#) Fluid (gal)

15276-15462' 7074 448396 383257

14997-15183' 6024 452353 378942

14722-14904' 5999 450043 377237

14439-14622' 6048 449377 376992

14156-14346' 6048 453481 381762

13879-14067' 6066 450664 398976

13602-13783' 5964 452579 373128

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 #292662 Verified by the BLM Well Information System.

For COG OPERATING LLC, sent to the Carlsbad

Committed to AFMSS for processing by DEBORAH HAM on 06/12/2015 ()

Name (please print) STORMI DAVIS

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 02/23/2015

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL **

Additional data for transaction #292662 that would not fit on the form

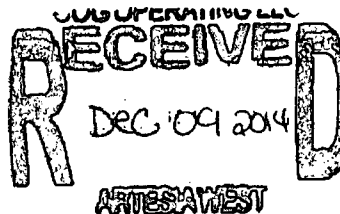
32. Additional remarks, continued

13325-13509' 6006 451346 370776
13044-13229' 6048 452951 374094
12765-12951' 5999 459443 376463
12490-12672' 6024 455325 373902
12207-12393' 6090 451652 372882
11928-12114' 6090 450523 370328
11644-11835' 6006 454934 370566
11364-11556' 6024 454985 372287
11091-11276' 6048 457893 373616
Totals 97557 7245945 6025207

Surveys are attached.



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



Well Name and Num: Lizard Pot Fed #5H
Location: Sec 36, T19S, R31E
Operator: COG
Drilling Contractor: McVay Drilling Company

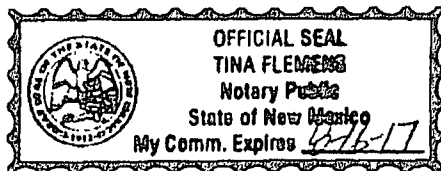
The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
1.30	297	0.90	7370	88.80	12546
1.53	657	1.30	7559	87.40	12832
3.70	1069	1.50	7747	90.60	13021
1.00	1455	0.60	8219	90.00	13398
1.10	1915	0.50	8408	88.90	13715
1.40	2290	0.40	8657	89.00	14057
1.10	2573	10.20	8916	88.80	14151
1.40	2780	40.20	9197	89.80	14246
1.00	3345	70.60	9415	90.50	14622
3.70	3847	89.80	9776	90.40	15190
2.90	4287	88.40	10152	90.40	15285
2.30	4547	88.80	10434	88.50	15562
1.40	5019	88.50	10717		
1.10	5583	90.20	11095		
1.10	6101	89.80	11470		
0.20	6571	89.10	11752		
0.70	6901	89.20	12224		

By: Mario A. Garcia S.

Subscribed and sworn to before me this 8th day of December, 2014

Tina Flemings
Notary Public, Lea County, New Mexico





December 2, 2014

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

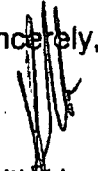
Attn: Kanicia Castillo

RE: Lizard Pot Federal #5H

Please find enclosed a copy of the survey from 0.00' to 8580.00' ran on the above referenced well.

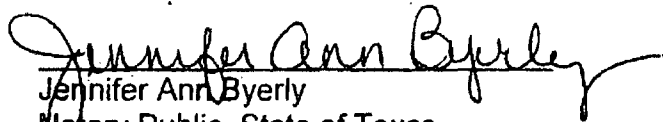
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

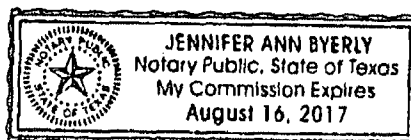
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 2 day of December A.D., 2014, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: COG Operating
Lease/Well: Lizard Pot Federal/5H

Rig Name: McVay #6
State/County: New Mexico/Eddy
Latitude: 32.61, Longitude: -103.82
GRID North is 0.28 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB= 18 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ...ot federal #5h gyro survey.ut
Minimum Curvature Method
Report Date/Time: 12/2/2014 / 13:04

VES Survey International
Fort Worth, Texas
817-741-3610
Surveyor: Logan Henry
Lizard Pot Federal 5H / API 30-015-42455

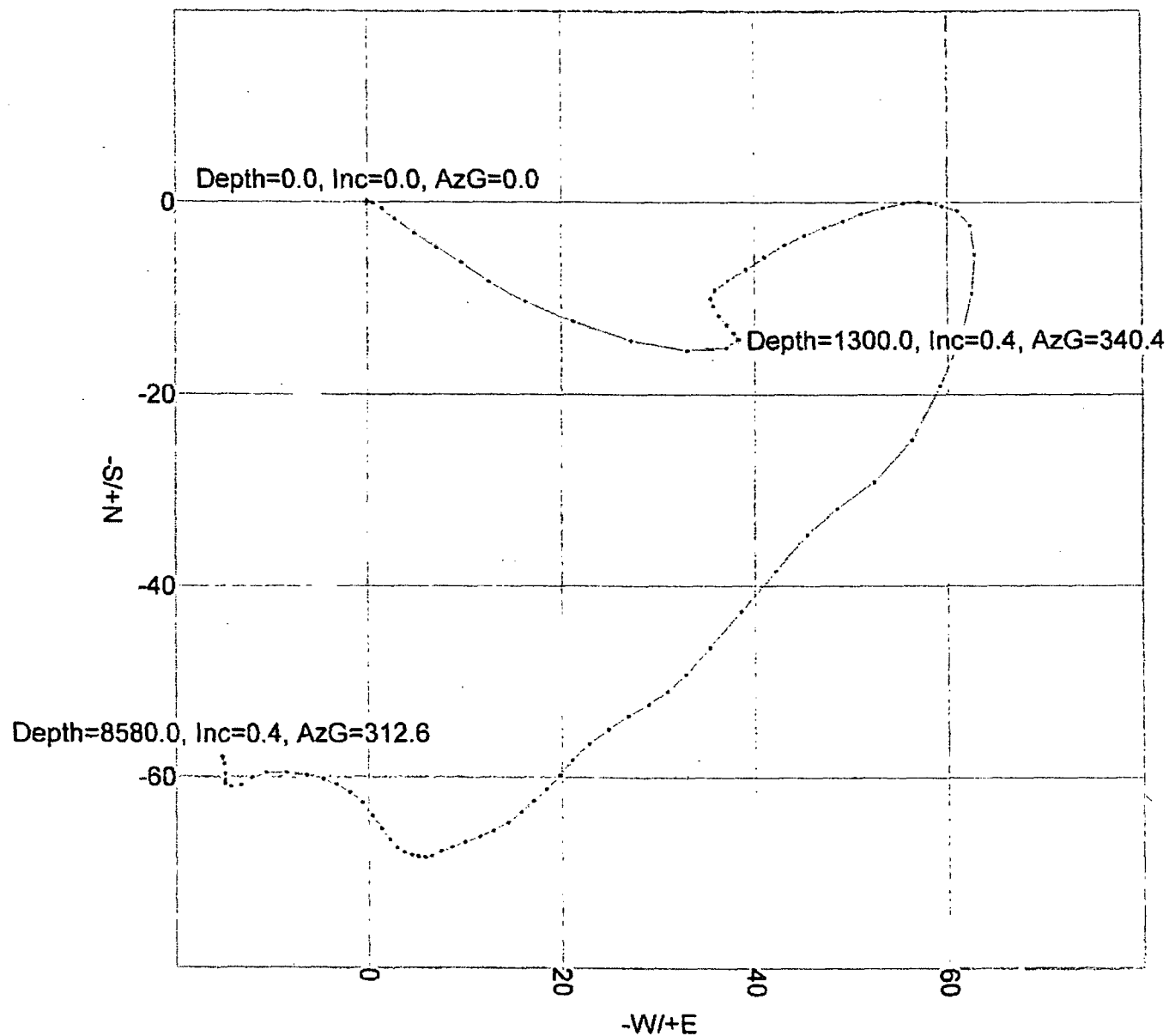
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	----
100.00	0.70	100.25	100.00	-0.11	0.60	-0.11	0.61	100.25	0.70
200.00	0.68	138.54	199.99	-0.66	1.60	-0.66	1.73	112.45	0.45
300.00	1.31	127.10	299.98	-1.79	2.90	-1.79	3.41	121.72	0.67
400.00	1.61	125.15	399.94	-3.24	4.89	-3.24	5.87	123.54	0.20
500.00	1.63	119.26	499.91	-4.70	7.21	-4.70	8.60	123.08	0.20
600.00	1.76	123.75	599.86	-6.24	9.73	-6.24	11.56	122.70	0.18
700.00	2.21	126.53	699.80	-8.24	12.55	-8.24	15.02	123.30	0.46
800.00	2.74	112.93	799.71	-10.32	16.30	-10.32	19.30	122.34	0.79
900.00	3.45	111.82	899.58	-12.37	21.29	-12.37	24.63	120.15	0.71
1000.00	3.77	105.11	999.37	-14.34	27.26	-14.34	30.80	117.76	0.53
1100.00	3.03	94.65	1099.19	-15.42	33.06	-15.42	36.48	115.00	0.97
1200.00	1.67	69.56	1199.11	-15.12	37.06	-15.12	40.03	112.20	1.67
1300.00	0.38	340.36	1299.09	-14.30	38.31	-14.30	40.90	110.47	1.71
1400.00	0.56	320.84	1399.09	-13.61	37.89	-13.61	40.26	109.76	0.24
1500.00	0.75	321.02	1499.08	-12.72	37.17	-12.72	39.29	108.89	0.19
1600.00	0.71	319.67	1599.07	-11.74	36.36	-11.74	38.21	107.89	0.04
1700.00	0.62	335.77	1699.07	-10.77	35.73	-10.77	37.32	106.77	0.21
1800.00	0.32	1.84	1799.06	-9.99	35.52	-9.99	36.90	105.71	0.36

Depth FT	Angle Deg	Unit Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.79	36.98	1899.06	-9.16	35.94	-9.16	37.09	104.29	0.56
2000.00	1.19	61.57	1999.04	-8.11	37.27	-8.11	38.15	102.28	0.57
2100.00	1.29	55.05	2099.02	-8.97	39.11	-6.97	39.73	100.11	0.17
2200.00	1.40	57.60	2198.99	-5.67	41.07	-5.67	41.46	97.86	0.13
2300.00	1.36	61.80	2298.96	-4.45	43.15	-4.45	43.38	95.89	0.11
2400.00	1.24	67.34	2398.94	-3.47	45.19	-3.47	45.33	94.40	0.18
2500.00	1.28	70.10	2498.91	-2.68	47.24	-2.68	47.32	93.24	0.08
2600.00	1.10	68.89	2598.89	-1.95	49.19	-1.95	49.23	92.27	0.18
2700.00	1.29	70.87	2698.87	-1.23	51.16	-1.23	51.17	91.38	0.20
2800.00	1.37	76.65	2798.84	-0.59	53.38	-0.59	53.39	90.63	0.15
2900.00	1.05	79.07	2898.82	-0.14	55.44	-0.14	55.44	90.14	0.32
3000.00	0.76	91.63	2998.81	0.02	57.01	0.02	57.01	89.98	0.35
3100.00	0.60	99.66	3098.80	-0.09	58.19	-0.09	58.19	90.09	0.19
3200.00	0.88	106.49	3198.79	-0.39	59.43	-0.39	59.43	90.38	0.29
3300.00	1.07	108.98	3298.78	-0.91	61.05	-0.91	61.05	90.86	0.20
3400.00	1.48	160.76	3398.76	-2.43	62.35	-2.43	62.40	92.23	1.17
3500.00	2.02	179.50	3498.71	-5.41	62.79	-5.41	63.02	94.92	0.78
3600.00	2.66	187.73	3598.63	-9.47	62.49	-9.47	63.21	98.62	0.73
3700.00	2.75	199.80	3698.52	-14.03	61.37	-14.03	62.95	102.88	0.57
3800.00	3.59	205.23	3798.36	-19.11	59.22	-19.11	62.23	107.89	0.89
3900.00	3.71	210.61	3898.16	-24.73	56.24	-24.73	61.44	113.73	0.36
4000.00	3.12	233.95	3997.99	-29.11	52.40	-29.11	59.94	119.06	1.50
4100.00	2.24	235.60	4097.88	-31.82	48.59	-31.82	58.08	123.22	0.88
4200.00	2.66	222.81	4197.79	-34.62	45.40	-34.62	57.09	127.33	0.69
4300.00	3.10	218.65	4297.66	-38.43	42.14	-38.43	57.03	132.36	0.49
4400.00	3.26	221.66	4397.51	-42.67	38.56	-42.67	57.51	137.89	0.23
4500.00	2.44	218.23	4497.38	-46.46	35.35	-46.46	58.38	142.73	0.84
4600.00	1.81	224.26	4597.31	-49.26	32.93	-49.26	59.26	146.24	0.66
4700.00	1.28	234.27	4697.28	-51.05	30.92	-51.05	59.69	148.80	0.59
4800.00	1.36	237.88	4797.25	-52.34	29.01	-52.34	59.84	151.01	0.11
4900.00	1.44	238.14	4897.22	-53.63	26.93	-53.63	60.01	153.33	0.08
5000.00	1.42	234.40	4997.19	-55.01	24.86	-55.01	60.37	155.68	0.10
5100.00	1.45	231.88	5097.16	-56.51	22.86	-56.51	60.96	157.97	0.07
5200.00	1.31	218.57	5197.13	-58.19	21.15	-58.19	61.92	160.02	0.35
5300.00	1.12	223.52	5297.11	-59.79	19.77	-59.79	62.98	161.70	0.22
5400.00	1.15	222.85	5397.09	-61.23	18.42	-61.23	63.94	163.26	0.04
5500.00	0.97	232.95	5497.07	-62.48	17.06	-62.48	64.76	164.72	0.26
5600.00	0.97	225.32	5597.06	-63.58	15.79	-63.58	65.51	166.06	0.13
5700.00	1.07	236.83	5697.04	-64.69	14.40	-64.69	66.27	167.45	0.23

Depth FT	Angle Deg	Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	0.95	242.47	5797.02	-65.58	12.88	-65.58	66.84	168.89	0.15
5900.00	0.78	252.49	5897.01	-66.17	11.50	-66.17	67.16	170.14	0.23
6000.00	1.10	247.43	5997.00	-66.74	9.97	-66.74	67.48	171.50	0.33
6100.00	0.58	248.37	6096.99	-67.30	8.61	-67.30	67.85	172.71	0.52
6200.00	0.77	246.54	6196.98	-67.75	7.52	-67.75	68.17	173.66	0.19
6300.00	0.46	240.74	6296.98	-68.22	6.56	-68.22	68.53	174.51	0.31
6400.00	0.42	275.99	6396.97	-68.37	5.84	-68.37	68.62	175.12	0.27
6500.00	0.40	276.22	6496.97	-68.30	5.12	-68.30	68.49	175.71	0.02
6600.00	0.34	290.69	6596.97	-68.15	4.49	-68.15	68.30	176.23	0.11
6700.00	0.60	289.10	6696.96	-67.88	3.72	-67.88	67.98	176.87	0.25
6800.00	0.49	319.39	6796.96	-67.38	2.95	-67.38	67.45	177.49	0.30
6900.00	0.82	321.55	6896.95	-66.50	2.23	-66.50	66.54	178.08	0.33
7000.00	0.85	322.54	6996.94	-65.35	1.33	-65.35	65.37	178.83	0.04
7100.00	1.02	327.18	7096.93	-64.01	0.40	-64.01	64.01	179.65	0.19
7200.00	0.93	318.16	7196.92	-62.66	-0.63	-62.66	62.66	180.57	0.18
7300.00	1.03	306.32	7296.90	-61.52	-1.89	-61.52	61.55	181.76	0.22
7400.00	0.79	292.24	7396.89	-60.73	-3.25	-60.73	60.82	183.06	0.33
7500.00	0.96	288.98	7496.88	-60.20	-4.67	-60.20	60.38	184.44	0.18
7600.00	1.10	281.02	7596.86	-59.75	-6.40	-59.75	60.09	186.12	0.20
7700.00	1.29	274.87	7696.84	-59.47	-8.47	-59.47	60.07	188.10	0.23
7800.00	1.17	263.45	7796.82	-59.49	-10.60	-59.49	60.43	190.10	0.27
7900.00	0.77	232.36	7896.80	-60.02	-12.15	-60.02	61.23	191.44	0.65
8000.00	0.78	236.56	7996.79	-60.80	-13.25	-60.80	62.23	192.30	0.06
8100.00	0.64	295.50	8096.79	-60.94	-14.32	-60.94	62.60	193.23	0.71
8200.00	0.12	303.66	8196.78	-60.64	-14.91	-60.64	62.45	193.82	0.52
8300.00	0.34	11.95	8296.78	-60.29	-14.94	-60.29	62.12	193.92	0.32
8400.00	0.43	362.71	8396.78	-59.63	-14.93	-59.63	61.47	194.05	0.16
8500.00	0.76	358.83	8496.78	-58.59	-14.99	-58.59	60.48	194.35	0.33
8580.00	0.44	312.55	8576.77	-57.85	-15.22	-57.85	59.82	194.74	0.70



VES Survey International
Fort Worth, Texas
817-741-3610
Surveyor: Logan Henry
Lizard Pot Federal 5H / API 30-015-42455



VES Survey Date: 11/21/2014

Archer Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well 5H
Project:	Eddy County, NM	TVD Reference:	3485'GK+18'KB @ 3504.00usft (Planning)
Site:	Lizard Pot Fed 5H	MD Reference:	3485'GK+18'KB @ 3504.00usft (Planning)
Well:	5H	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:		Lizard Pot Fed 5H			
Site Position:		Northing:	587,509.90 usft	Latitude:	32° 36' 50.84 N
From:	Map	Easting:	957,809.80 usft	Longitude:	103° 49' 14.95 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.28 °

Well:	5H					
Well Position	+N/-S	0.00 usft	Northing:	587,509.90 usft	Latitude:	32° 36' 50.84 N
	+E/-W	0.00 usft	Easting:	957,809.80 usft	Longitude:	103° 49' 14.95 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,485.00 usft

Wellbore	Lateral				
Magnetic	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/11/2014	7.55	60.60	48,646

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	177.48	

Survey Program		Date	12/3/2014	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	8,580.00	Survey #2 (Lateral)	GYRO-NS	Gyrocompass Gyro
8,664.00	15,582.00	Survey #3 (Lateral)	MWD+HDGM	OWSG MWD + HDGM
15,620.00	15,620.00	Survey #4 (Lateral)	Project	Projection

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld 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
Lizard Pot 1H Surface									
2.68	0.02	100.25	2.68	0.00	0.00	0.00	0.70	0.70	0.00
Lizard Pot 1H PP									
100.00	0.70	100.25	100.00	-0.11	0.60	0.14	0.70	0.70	0.00
200.00	0.68	138.54	199.99	-0.66	1.60	0.73	0.45	-0.02	38.29
300.00	1.31	127.10	299.98	-1.80	2.90	1.92	0.66	0.63	-11.44
400.00	1.51	125.15	399.94	-3.24	4.89	3.46	0.21	0.20	-1.95

Archer Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well 5H
Project:	Eddy County, NM	TVD Reference:	3485 GK+18'KB @ 3504.00usft (Planning)
Site:	Lizard Poi Fed 5H	MD Reference:	3485 GK+18'KB @ 3504.00usft (Planning)
Well:	5H	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 (1/100usft)	Build Rate (1/100usft)	Turn Rate (1/100usft)
500.00	1.83	118.26	489.91	-4.70	7.21	5.01	0.20	0.12	-5.89
600.00	1.76	123.75	599.88	-6.25	9.72	6.87	0.19	0.13	4.49
700.00	2.21	128.53	699.80	-8.25	12.55	8.60	0.46	0.45	2.78
800.00	2.74	112.93	799.71	-10.33	18.30	11.04	0.79	0.53	-13.60
900.00	3.45	111.82	899.56	-12.38	21.30	13.31	0.71	0.71	-1.11
1,000.00	3.77	105.11	999.37	-14.35	27.26	15.55	0.53	0.32	-6.71
1,100.00	3.03	94.65	1,099.19	-15.42	33.07	16.87	0.96	-0.74	-10.46
1,200.00	1.87	89.58	1,199.11	-15.13	37.07	16.76	1.67	-1.36	-25.09
1,300.00	0.38	340.36	1,299.09	-14.31	38.33	15.99	1.71	-1.29	-89.20
1,400.00	0.58	320.84	1,399.09	-13.62	37.91	15.28	0.24	0.18	-19.52
1,500.00	0.75	321.02	1,499.08	-12.73	37.19	14.38	0.19	0.19	0.18
1,600.00	0.71	319.67	1,599.07	-11.75	36.37	13.35	0.04	-0.04	-1.35
1,700.00	0.62	335.77	1,699.07	-10.78	35.75	12.36	0.21	-0.09	16.10
1,800.00	0.32	1.84	1,799.06	-10.01	35.54	11.57	0.36	-0.30	26.07
1,900.00	0.79	36.98	1,899.06	-9.18	35.98	10.76	0.56	0.47	35.14
2,000.00	1.19	61.57	1,999.04	-8.13	37.29	9.78	0.57	0.40	24.59
2,100.00	1.29	55.05	2,099.02	-8.99	39.12	8.72	0.17	0.10	-6.52
2,200.00	1.40	57.60	2,198.99	-5.69	41.08	7.51	0.13	0.11	2.55
2,300.00	1.36	61.60	2,298.98	-4.48	43.16	6.39	0.11	-0.04	4.20
2,400.00	1.24	67.34	2,398.94	-3.50	45.20	5.50	0.17	-0.12	5.54
2,500.00	1.28	70.10	2,498.91	-2.70	47.25	4.80	0.07	0.04	2.78
2,600.00	1.10	68.89	2,598.89	-1.98	49.19	4.16	0.18	-0.18	-1.21
2,700.00	1.29	70.87	2,698.87	-1.26	51.15	3.53	0.19	0.19	1.98
2,800.00	1.37	76.65	2,798.84	-0.62	53.38	2.99	0.16	0.08	5.78
2,900.00	1.05	79.07	2,898.82	-0.17	55.44	2.83	0.32	-0.32	2.42
3,000.00	0.76	91.63	2,998.81	-0.01	57.00	2.54	0.35	-0.29	12.56
3,100.00	0.60	99.66	3,098.80	-0.12	58.18	2.70	0.19	-0.16	8.03
3,200.00	0.88	106.49	3,198.79	-0.43	59.44	3.08	0.29	0.28	6.83
3,300.00	1.07	108.96	3,298.78	-0.95	61.06	3.65	0.19	0.19	2.49
3,400.00	1.48	160.76	3,398.76	-2.47	62.36	5.23	1.17	0.41	51.78
3,500.00	2.02	179.50	3,498.71	-5.45	62.81	8.23	0.78	0.54	18.74
3,600.00	2.66	187.73	3,598.63	-9.52	62.51	12.28	0.72	0.64	8.23
3,700.00	2.75	199.80	3,698.52	-14.07	61.38	16.78	0.58	0.09	12.07
3,800.00	3.59	205.23	3,798.36	-19.16	59.24	21.77	0.89	0.84	5.43
3,900.00	3.71	210.61	3,898.16	-24.78	56.25	27.25	0.36	0.12	5.38
4,000.00	3.12	233.95	3,997.99	-29.18	52.41	31.46	1.50	-0.59	23.34
4,100.00	2.24	235.60	4,097.88	-31.87	48.59	33.99	0.88	-0.88	1.85
4,200.00	2.66	222.81	4,197.79	-34.68	45.40	36.65	0.69	0.42	-12.79
4,300.00	3.10	218.85	4,297.66	-38.49	42.14	40.32	0.49	0.44	-4.16
4,400.00	3.26	221.66	4,397.51	-42.73	38.56	44.39	0.23	0.18	3.01
4,500.00	2.44	218.23	4,497.38	-46.52	35.35	48.04	0.84	-0.82	-3.43
4,600.00	1.81	224.28	4,597.31	-49.33	32.93	50.74	0.67	-0.63	6.03
4,700.00	1.28	234.27	4,697.28	-51.11	30.92	52.43	0.59	-0.53	10.01
4,800.00	1.36	237.88	4,797.25	-52.39	29.01	53.83	0.12	0.08	3.61

Archer Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well 5H
Project:	Eddy County, NM	TVD Reference:	3485 GK+18 KB @ 3504.00usft (Planning)
Site:	Lizard Poi Fed 5H	MD Reference:	3485 GK+18 KB @ 3504.00usft (Planning)
Well:	5H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM R5000.1MULTI

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)
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4,900.00	1.44	238.14	4,897.22	-53.69	26.94	54.83	0.08	0.08	0.26
5,000.00	1.42	234.40	4,997.19	-55.07	24.87	56.12	0.10	-0.02	-3.74
5,100.00	1.45	231.88	5,097.18	-56.57	22.86	57.53	0.07	0.03	-2.52
5,200.00	1.31	218.57	5,197.13	-58.25	21.15	59.13	0.35	-0.14	-13.31
5,300.00	1.12	223.52	5,297.11	-59.85	19.77	60.67	0.22	-0.19	4.95
5,400.00	1.15	222.85	5,397.09	-61.30	18.41	62.05	0.03	0.03	-0.67
5,500.00	0.97	232.95	5,497.07	-62.54	17.08	63.24	0.26	-0.18	10.10
5,600.00	0.97	225.32	5,597.05	-63.65	15.78	64.28	0.13	0.00	-7.63
5,700.00	1.07	238.83	5,697.04	-64.75	14.39	65.33	0.23	0.10	11.51
5,800.00	0.85	242.47	5,797.02	-65.85	12.88	66.15	0.16	-0.12	5.64
5,900.00	0.78	252.49	5,897.01	-66.23	11.49	66.88	0.23	-0.17	10.02
6,000.00	1.10	247.43	5,997.00	-66.81	9.96	67.18	0.33	0.32	-5.06
6,100.00	0.58	248.37	6,096.99	-67.38	8.80	67.88	0.52	-0.52	0.94
6,200.00	0.77	246.54	6,196.98	-67.82	7.51	68.08	0.19	0.19	-1.83
6,300.00	0.46	240.74	6,296.97	-68.28	6.55	68.50	0.32	-0.31	-5.60
6,400.00	0.42	275.99	6,396.97	-68.44	5.83	68.63	0.27	-0.04	35.25
6,500.00	0.40	276.22	6,496.97	-68.38	5.12	68.52	0.02	-0.02	0.23
6,600.00	0.34	290.69	6,596.97	-68.22	4.50	68.35	0.11	-0.06	14.47
6,700.00	0.60	289.10	6,696.96	-67.94	3.72	68.04	0.26	0.26	-1.59
6,800.00	0.49	319.39	6,796.96	-67.45	2.95	67.51	0.30	-0.11	30.29
6,900.00	0.82	321.55	6,896.95	-66.56	2.23	66.60	0.33	0.33	2.16
7,000.00	0.85	322.54	6,996.94	-65.41	1.33	65.41	0.03	0.03	0.99
7,100.00	1.02	327.18	7,096.93	-64.08	0.40	64.03	0.19	0.17	4.64
7,200.00	0.93	318.16	7,196.91	-62.72	-0.63	62.63	0.18	-0.09	-9.02
7,300.00	1.03	306.32	7,296.90	-61.59	-1.89	61.44	0.23	0.10	-11.64
7,400.00	0.79	292.24	7,396.89	-60.79	-3.25	60.59	0.33	-0.24	-14.08
7,500.00	0.96	298.98	7,496.88	-60.26	-4.68	59.99	0.18	0.17	-3.26
7,600.00	1.10	281.02	7,596.86	-59.80	-6.42	59.46	0.20	0.14	-7.96
7,700.00	1.29	274.87	7,696.84	-59.53	-8.48	59.09	0.23	0.19	-6.15
7,800.00	1.17	263.45	7,796.81	-59.55	-10.62	59.02	0.27	-0.12	-11.42
7,900.00	0.77	232.36	7,896.80	-60.07	-12.16	59.47	0.65	-0.40	-31.09
8,000.00	0.78	238.56	7,996.79	-60.86	-13.26	60.21	0.06	0.01	4.20
8,100.00	0.64	295.50	8,096.78	-60.99	-14.34	60.30	0.71	-0.14	58.94
8,200.00	0.12	303.68	8,196.78	-60.69	-14.93	59.97	0.52	-0.52	8.16
8,300.00	0.34	11.95	8,296.78	-60.35	-14.95	59.62	0.32	0.22	66.29
8,400.00	0.43	352.71	8,396.76	-59.68	-14.94	58.96	0.16	0.09	-19.24
8,500.00	0.76	358.83	8,496.77	-58.65	-15.00	57.93	0.34	0.33	6.12
8,580.00	0.44	312.55	8,576.77	-57.91	-15.24	57.18	0.69	-0.40	-57.85
8,664.00	0.40	309.40	8,660.77	-57.51	-15.70	56.75	0.05	-0.05	-3.75
8,696.00	0.40	316.80	8,692.77	-57.35	-15.86	56.59	0.16	0.00	23.13
8,727.00	0.50	170.90	8,723.77	-57.41	-15.92	56.65	2.76	0.32	-470.65
8,759.00	4.40	160.10	8,755.73	-58.70	-15.48	57.98	12.22	12.19	-33.75
8,790.00	5.70	168.20	8,788.61	-61.33	-14.76	60.61	4.77	4.19	26.13

Archer Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well SH
Project:	Eddy County, NM	TVD Reference:	3485 GK+19 KB @ 3504.00usft (Planning)
Sits:	Lizard Pot Fed SH	MD Reference:	3485 GK+19 KB @ 3504.00usft (Planning)
Well:	SH	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)
8,821.00	4.30	178.00	8,817.49	-83.99	-14.36	83.29	5.01	-4.52	25.18
8,853.00	5.50	169.50	8,849.37	-86.70	-14.00	86.01	4.13	3.75	-20.31
8,884.00	7.80	168.90	8,880.16	-70.21	-13.25	89.55	7.48	7.42	-8.39
8,916.00	10.20	169.00	8,911.77	-75.10	-12.22	74.49	7.57	7.50	6.56
8,947.00	13.80	172.50	8,942.09	-81.47	-11.21	80.89	11.84	11.81	11.29
8,978.00	16.30	171.50	8,972.02	-89.44	-10.08	88.90	8.11	8.08	-3.23
9,010.00	19.10	170.30	9,002.50	-99.04	-8.54	98.56	8.82	8.75	-3.75
9,041.00	22.40	170.20	9,031.49	-108.86	-6.68	108.48	10.65	10.65	-0.32
9,072.00	25.80	170.90	9,059.78	-122.35	-4.61	122.02	11.01	10.97	2.28
9,103.00	28.80	171.60	9,087.20	-136.84	-2.41	136.39	12.95	12.90	2.26
9,135.00	33.60	170.50	9,114.42	-153.24	0.21	153.10	12.01	11.88	-3.44
9,166.00	37.20	171.40	9,139.68	-170.97	3.03	170.94	11.73	11.61	2.90
9,197.00	40.20	173.10	9,163.88	-190.18	5.83	190.24	10.27	9.68	5.48
9,228.00	44.10	174.40	9,186.85	-210.85	7.89	210.99	12.89	12.58	4.19
9,259.00	47.60	174.50	9,208.44	-232.99	10.04	233.20	11.29	11.29	0.32
9,290.00	51.70	174.50	9,228.51	-256.50	12.30	256.79	13.23	13.23	0.00
9,322.00	56.10	175.20	9,247.36	-282.24	14.82	282.61	13.88	13.75	2.19
9,353.00	61.00	176.70	9,263.53	-308.81	16.48	309.04	16.34	15.81	4.84
9,384.00	65.60	177.60	9,277.46	-336.27	17.85	336.73	15.06	14.84	2.90
9,415.00	70.60	178.20	9,289.02	-365.00	18.90	365.48	16.23	16.13	1.94
9,433.00	73.60	178.20	9,294.55	-382.12	19.44	382.61	16.67	16.67	0.00
9,464.00	78.10	179.70	9,302.12	-412.17	19.99	412.65	15.26	14.52	4.64
9,495.00	79.30	179.40	9,308.20	-442.56	20.22	443.02	3.99	3.87	-0.97
9,526.00	80.70	181.80	9,313.58	-473.09	19.96	473.51	8.32	4.52	7.10
9,557.00	81.80	182.50	9,318.30	-503.71	18.86	504.05	4.56	3.55	2.90
9,589.00	83.30	184.30	9,322.45	-535.38	16.98	535.80	7.29	4.69	5.63
9,620.00	84.70	186.40	9,325.89	-566.07	14.10	566.14	8.11	4.52	6.77
9,651.00	86.90	186.80	9,327.96	-596.78	10.55	596.66	7.21	7.10	1.29
9,682.00	89.50	186.30	9,328.93	-627.56	7.02	627.26	6.54	8.39	-1.61
9,776.00	89.80	182.40	9,329.51	-721.27	-0.11	720.56	4.18	0.32	-4.15
9,870.00	89.80	178.10	9,329.83	-815.25	-0.52	814.42	4.57	0.00	-4.57
9,964.00	90.10	175.10	9,329.92	-909.07	5.05	908.40	3.21	0.32	-3.19
10,058.00	90.20	174.30	9,329.67	-1,003.66	13.83	1,003.29	0.85	0.11	-0.64
10,152.00	88.40	178.00	9,330.80	-1,096.32	21.89	1,096.20	2.66	-1.94	1.83
10,246.00	89.80	175.50	9,332.28	-1,180.04	28.65	1,180.14	1.58	1.49	-0.53
10,340.00	89.50	175.40	9,332.85	-1,263.75	36.11	1,264.06	0.34	-0.32	-0.11
10,434.00	88.80	176.10	9,334.25	-1,377.48	43.08	1,378.03	1.05	-0.74	0.74
10,529.00	90.20	176.00	9,335.08	-1,472.24	49.62	1,473.00	1.48	1.47	-0.11
10,623.00	89.70	175.90	9,335.16	-1,566.01	56.28	1,566.98	0.54	-0.53	-0.11
10,717.00	88.50	175.40	9,336.64	-1,659.72	63.39	1,660.90	1.38	-1.28	-0.53
10,811.00	89.90	174.80	9,337.95	-1,753.37	71.42	1,754.81	1.82	1.49	-0.64
10,906.00	89.10	176.10	9,338.78	-1,848.08	78.95	1,849.75	1.61	-0.84	1.37
11,001.00	88.80	177.10	9,340.44	-1,942.88	84.58	1,944.72	1.07	-0.21	1.05

Archer Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well 5H
Project:	Eddy County, NM	TVD Reference:	3485'GK+18'KB @ 3504.00usft (Planning)
Site:	Lizard Poi Fed 5H	MD Reference:	3485'GK+18'KB @ 3504.00usft (Planning)
Well:	5H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM R5000.1MULTI

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)
11,095.00	80.20	177.40	9,341.17	-2,036.77	89.09	2,038.71	1.42	1.38	0.32
11,189.00	89.40	177.70	9,341.50	-2,130.68	93.11	2,132.71	0.91	-0.85	0.32
11,283.00	88.70	177.40	9,343.06	-2,224.58	97.13	2,228.70	0.81	-0.74	-0.32
11,377.00	80.10	177.50	9,344.04	-2,318.48	101.31	2,320.69	1.49	1.49	0.11
11,470.00	89.80	178.80	9,344.13	-2,411.36	105.84	2,413.69	0.82	-0.32	-0.75
11,565.00	88.70	176.40	9,345.37	-2,506.19	111.57	2,508.67	1.23	-1.16	-0.42
11,659.00	90.10	175.80	9,346.35	-2,599.98	117.88	2,602.83	1.62	1.49	-0.64
11,752.00	89.10	174.70	9,347.00	-2,692.64	125.66	2,695.56	1.60	-1.08	-1.18
11,846.00	88.60	175.20	9,348.89	-2,786.25	133.94	2,789.45	0.75	-0.53	0.53
11,941.00	89.80	174.70	9,350.22	-2,880.87	142.30	2,884.35	1.37	1.26	-0.53
12,035.00	88.50	175.10	9,351.61	-2,974.49	150.65	2,978.24	1.45	-1.38	0.43
12,130.00	89.80	174.80	9,353.02	-3,069.11	159.01	3,073.14	1.40	1.37	-0.32
12,224.00	89.20	175.30	9,353.84	-3,162.75	167.12	3,167.05	0.83	-0.64	0.53
12,318.00	88.30	176.30	9,355.89	-3,256.48	174.01	3,260.99	1.43	-0.86	1.08
12,382.00	88.70	176.80	9,357.04	-3,300.38	178.65	3,304.97	1.45	0.91	1.14
12,458.00	88.80	175.50	9,359.09	-3,394.14	182.98	3,398.92	1.39	0.11	-1.38
12,550.00	87.30	177.10	9,362.29	-3,487.88	189.03	3,492.84	2.33	-1.60	1.70
12,645.00	87.30	176.80	9,366.77	-3,582.65	194.08	3,587.73	0.32	0.00	-0.32
12,739.00	88.60	177.80	9,371.77	-3,676.41	198.50	3,681.59	1.30	-0.74	1.08
12,832.00	87.40	178.20	9,376.84	-3,769.22	201.74	3,774.46	0.96	0.86	0.43
12,928.00	88.40	179.40	9,380.08	-3,863.14	203.71	3,868.37	1.86	1.08	1.28
13,021.00	90.60	179.40	9,380.91	-3,958.12	204.70	3,963.31	2.32	2.32	0.00
13,115.00	90.80	178.80	9,379.93	-4,052.11	206.18	4,057.28	0.84	0.00	-0.84
13,209.00	89.90	178.60	9,379.51	-4,146.08	208.31	4,151.24	0.77	-0.74	-0.21
13,303.00	90.00	178.10	9,379.60	-4,240.04	211.02	4,245.23	0.54	0.11	-0.53
13,398.00	90.00	178.20	9,379.60	-4,334.99	214.08	4,340.22	0.11	0.00	0.11
13,492.00	90.20	178.30	9,379.43	-4,428.95	216.95	4,434.21	0.24	0.21	0.11
13,586.00	89.80	177.40	9,379.43	-4,522.88	220.48	4,528.21	1.05	-0.43	-0.86
13,680.00	89.40	177.70	9,380.09	-4,616.79	224.50	4,622.20	0.53	-0.43	0.32
13,775.00	88.90	177.10	9,381.50	-4,711.68	228.81	4,717.19	0.82	-0.53	-0.63
13,868.00	88.60	177.30	9,383.53	-4,804.55	233.35	4,810.17	0.39	-0.32	0.22
13,963.00	88.40	177.00	9,388.01	-4,899.40	238.07	4,905.14	0.38	-0.21	-0.32
14,057.00	88.00	177.90	9,388.15	-4,993.28	242.25	4,999.11	1.15	0.64	0.86
14,151.00	88.80	177.40	9,389.95	-5,087.18	246.10	5,093.09	0.57	-0.21	-0.53
14,246.00	89.80	178.60	9,391.11	-5,182.11	249.42	5,188.08	1.64	1.05	1.28
14,340.00	89.90	178.70	9,391.36	-5,276.09	251.63	5,282.06	0.15	0.11	0.11
14,434.00	89.00	179.20	9,392.26	-5,370.07	253.36	5,376.02	1.10	-0.98	0.53
14,528.00	89.80	179.80	9,393.24	-5,464.06	254.18	5,469.95	1.08	0.85	0.64
14,622.00	90.50	178.80	9,393.00	-5,558.05	255.33	5,563.90	1.30	0.74	-1.06
14,715.00	90.20	178.50	9,392.43	-5,651.02	257.52	5,656.86	0.46	-0.32	-0.32
14,810.00	90.30	178.60	9,392.02	-5,745.99	259.92	5,751.86	0.15	0.11	0.11
14,905.00	89.80	177.40	9,391.93	-5,840.93	263.24	5,846.88	1.37	-0.53	-1.26
15,000.00	89.20	177.50	9,392.76	-5,935.83	267.46	5,941.85	0.64	-0.83	0.11
15,095.00	90.30	178.00	9,393.18	-6,030.76	271.19	6,036.85	1.27	1.16	0.53

Archer Survey Report

Company:	COG OPERATING, LLC	Local Co-ordinate Reference:	Well 5H
Project:	Eddy County, NM	TVD Reference:	3485 GK+19 KB @ 3504.00usft (Planning)
Site:	Lizard Pot Fed 5H	MD Reference:	3485 GK+19 KB @ 3504.00usft (Planning)
Well:	5H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM R5000.1 MULTI

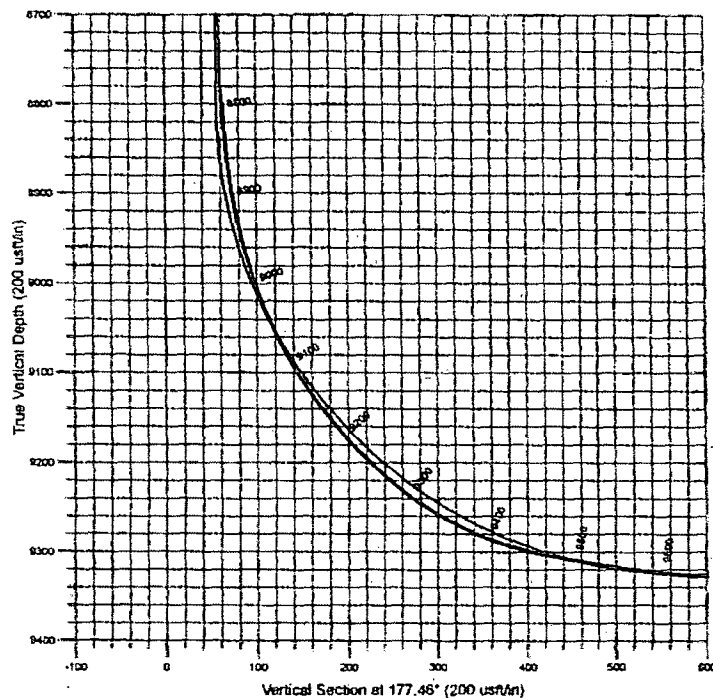
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,190.00	90.40	177.60	9,392.60	-8,125.68	274.84	8,131.84	0.43	0.11	-0.42
15,285.00	90.40	177.70	9,391.93	-8,220.60	276.73	8,228.84	0.11	0.00	0.11
15,380.00	89.10	177.70	9,392.35	-8,315.52	282.55	8,321.84	1.37	-1.37	0.00
15,476.00	88.70	176.10	9,394.19	-8,411.36	287.74	8,417.81	1.72	-0.42	-1.67
15,562.00	88.50	175.10	9,396.29	-8,497.08	294.33	8,503.74	1.19	-0.23	-1.16
15,620.00	88.50	175.10	9,397.81	-8,554.85	299.28	8,581.67	0.00	0.00	0.00
Lizard Pot 1H PBHL - Lizard Pot 1H BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Lizard Pot 1H Surface	0.00	0.00	0.00	0.00	0.00	587,509.90	657,809.80	32° 38' 50.84 N	103° 49' 14.95 W
- actual wellpath hits target center									
- Point									
Lizard Pot 1H BHL	0.00	0.00	9,397.81	-8,554.85	299.28	580,955.08	658,109.09	32° 35' 45.97 N	103° 48' 11.82 W
- actual wellpath hits target center									
- Point									

Field: Eddy County, NM
Site: Uizard Pot Fed 5H
Well: 5H
Wellbore: Lateral
Plan: Surveys



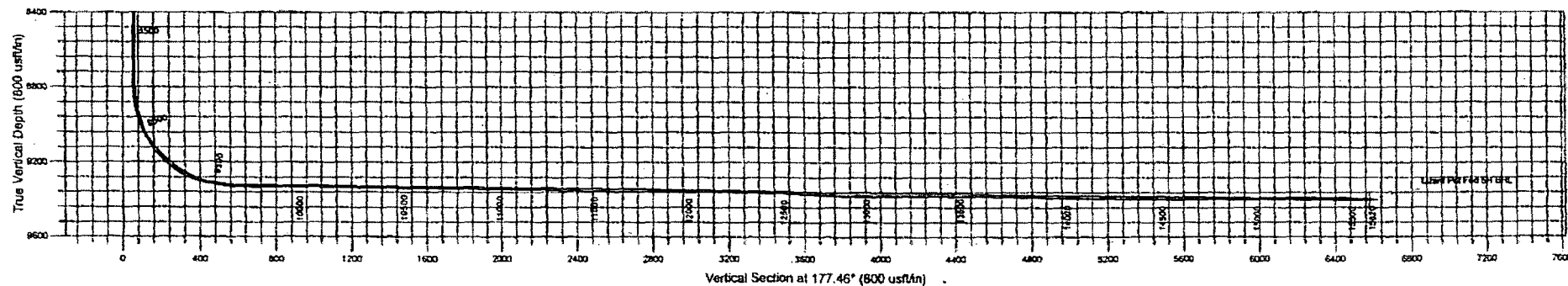
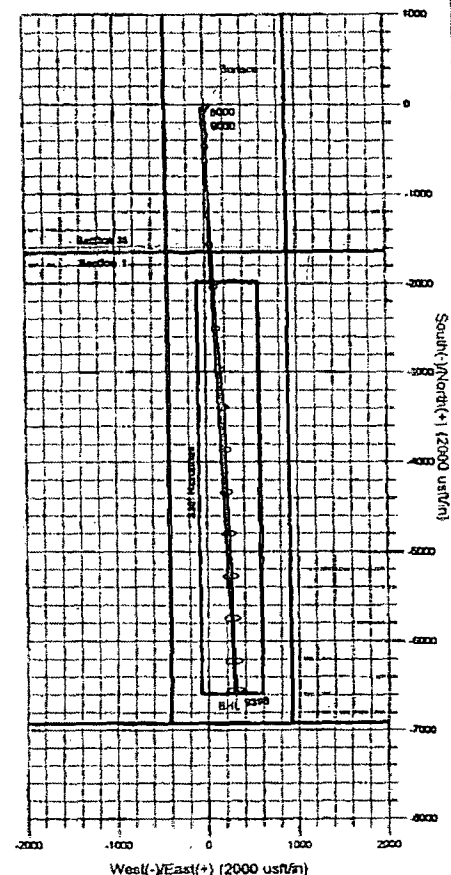
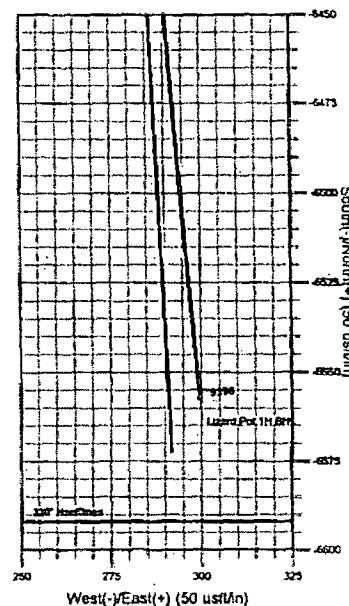
TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Lizard Pot 1H Surface	0.00	0.00	0.00	587509.80	657809.80	32° 36' 50.84 N	103° 48' 14.95 W	Point
Lizard Pot 1H BHL	9397.81	-6554.85	299.28	580955.05	658109.08	32° 35' 45.97 N	103° 49' 11.82 W	Point



Azimuths to Grid North
True North: -0.28°
Magnetic North: 7.27°

Magnetic Field
Strength: 48646.1nT
Dip Angle: 60.60°
Date: 11/11/2014
Model: HDGM

— 5H, Lateral, Plan #3 proj V0
— Surveys



Archer

ARCHER DIRECTIONAL DRILLING SERVICES
12101 Cutten Rd. Houston, Texas 77066
Phone: 281-301-2600 Fax: 281-301-2795

Design: Surveys (5H/Lateral)
Created By: Keith Noack
Date: 11:10, December 03 2014