

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTJUN 02 2008
OCD-ARTESIAFORM APPROVED
OMB No. 1004-0137
Expires, July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other			5. Lease Serial No. NMNM119272		
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other _____			6. If Indian, Allottee or Tribe Name		
2. Name of Operator CHESAPEAKE OPERATING, INC. E-Mail: linda.good@chk.com			7. Unit or CA Agreement Name and No. PENDING		
3. Address P.O. BOX 18486 OKLAHOMA CITY, OK 73154-0496			8. Lease Name and Well No. IMC 21 FEDERAL COM 2H		
3a. Phone No. (include area code) Ph: 405-767-4275			9. API Well No. 30-015-36109		
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface NENE 460FNL 410FEL At top prod interval reported below SESE 328FSL 646FEL At total depth SESE 328FSL 646FEL			10. Field and Pool, or Exploratory HARROUN RANCH DELAWARE NE		
14. Date Spudded 02/26/2008			11. Sec., T., R., M., or Block and Survey or Area Sec 21 T23S R29E Mer NMP		
15. Date T.D. Reached 04/11/2008			12. County or Parish EDDY		
16. Date Completed ☐ D & A ☒ Ready to Prod. 05/07/2008			13. State NM		
17. Elevations (DF, KB, RT, GL)* 2957 GL					
18. Total Depth: MD 10846 TVD 10671			19. Plug Back T.D.: MD 10803 TVD 10629		
20. Depth Bridge Plug Set: MD TVD					
21. Type Electric & Other Mechanical Logs Run (Submit copy of each)			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 H-40	48.0		370		390		0	
11.000	8.625 K-55	36.0		3000		1500		0	
7.875	5.500 N-80	17.0		10846		540		4027	

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	6116							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) DELAWARE	9275	10791	9275 TO 10791		28	OPEN
B) DELAWARE	7680	8981	7680 TO 8981		28	OPEN
C)						
D)						

26. Perforation Record

Depth Interval	Amount and Type of Material
9275 TO 10791	ACID W/5000 GAL 15% NEFE + BS - FRAC W/103,488 GAL B FRAC 25 X-LINK GEL, 165,000# 16/30 WHITE SAND
9275 TO 10791	TAILING W/60,000# 16/30 SUPER LC - FLUSH W/10,750 GAL SLK WTR
7680 TO 8981	ACID W/5000 GAL 15% NEFE + 50 BS - FRAC W/110,544 GAL B FRAC 25 X-LINK GEL CONTAINING 165,000#
7680 TO 8981	16/30 WHITE SAND, TAILING W/60,000# 16/30 SUPER LC - FLUSH W/208 BBL SLK WTR

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
05/15/2008	05/26/2008	24	→	55.0	64.0	745.0			ELECTRIC PUMPING UNIT
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→	55	64	745		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	
			→						

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

ELECTRONIC SUBMISSION #60477 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

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
BASE OF SALT	0	2968			
TOP OF DELAWARE	2968				
BELL CANYON	3000	3836	SAND/SILT/SHALE		
CHERRY CANYON	3836	5043	SAND/SILT/SHALE		
BRUSHY CANYON	5043	9000	SAND/SILT/SHALE		

32. Additional remarks (include plugging procedure):
EMAILED LAS LOGS TO JERRY FANT.

COMM AGREEMENT IS OUT FOR SIGNATURES, WILL BE SUBMITTED TO THE BLM ASAP.

(CHK PN 615497)

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 #60477 Verified by the BLM Well Information System.
For CHESAPEAKE OPERATING, INC., sent to the Carlsbad

Name (please print) LINDA GOOD

Title REGULATORY COMPLIANCE SPEC.

Signature (Electronic Submission)

Date 05/27/2008

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 **



Current Wellbore Schematic with Survey Tracks

IMC 21 FED COM 2H

Field: SE EDDY Teledyne Prospect
County: EDDY
State: NEW MEXICO
Elevation: GL 2,960.00 KB 2,978.00
KB Height: 18.00

Location: SEC 21, 23S-29E, 460 FNL & 410 FEL

Spud Date: 2/25/2008
Initial Compl. Date:
API #: 3001536109
CHK Property #: 615497
1st Prod Date: 5/15/2008
PBD: Original Hole - 10804.9
TD: 10,846.0

Well Config - Original Hole, 5/27/2008 9:49:55 AM			Well History	
RKB (MD)	RKB (TVD)	Incl	Schematic - Actual	Date Event
8	7	6.9		4/22/2008 Tag PBD @ 10803'
18	15	15.8		4/23/2008 PERF Delaware @ 9275-76, 9550-51, 9750-51, 10000-01, 10420-21, 10575-56, 10790-91 w/ 4 jspl, 28 holes
34	29	29.9		4/24/2008 ACDZ 9275-10791 w/ 5000 gal 15% NeFe
46	39	40.2		4/28/2008 FRAC 9275-10791 w/ 103488 gal B Frac Cross Link gel w/ 165000# 16/30 White sd & 60000# 16/30 Super LC Flush w/ 10750 gal Slick wtr
369	340	0.5		4/29/2008 CBP @ 9200'
370	340	0.5		4/30/2008 PERF Delaware @ 9680-81, 7910-11, 8150-51, 8575-76, 8750-51, 8980-81 w/ 4 jspl, 28 holes Guns did not fire @ 8750' Ran back in hole and PERF @ 8750-51
1,996	1,966	0.5		5/1/2008 ACDZ 7680-8981 w/ 5000 gal 15% NeFe
2,906	2,876	1.0		5/5/2008 FRAC 7680-8981 w/ 110544 gal B Frac 25 X link gel w/ 165000# 16/30 White sd & 60000# 16/30 Super LC
2,907	2,877	1.0		5/7/2008 DO CBP @ 9200' CO to 10803'
2,999	2,969	0.8		5/8/2008 Tubing - Production set at 6,116 OffKB on 5/8/2008
3,000	2,970	0.8		
4,028	3,997	0.2		
4,028	3,998	0.2		
4,030	4,000	0.2		
5,796	5,766	0.4		
6,031	6,000	0.9		
6,033	6,003	1.0		
6,046	6,016	1.3		
6,065	6,035	2.8		
6,066	6,036	2.9		
6,068	6,038	3.1		
6,075	6,045	3.8		
6,082	6,052	4.4		
6,115	6,085	8.3		
6,116	6,086	8.4		
7,680	6,524	88.7		
8,981	6,542	92.5		
9,275	6,538	91.4		
10,791	6,526	91.4		
10,805				
10,806				
10,845				
10,846				

RECEIVED

OPERATOR Chesapeake
WELL/LEASE IMC 21 Fed. Com 2H
COUNTY Eddy RIG 142

APR 25 2008

BY:

STATE OF NEW MEXICO
DEVIATION REPORT

187	0.25	5,019	0.10
355	0.25	5,177	0.30
416	0.70	5,336	0.20
578	1.70	5,494	0.60
668	0.60	5,653	0.90
787	0.60	5,811	0.40
1,024	0.40	5,969	0.40
1,083	0.50		
1,318	0.40		
1,413	1.50		
1,507	0.40		
1,588	1.20		
1,762	0.60		
1,825	0.70		
1,920	0.90		
2,016	0.70		
2,400	0.50		
2,592	0.80		
2,655	1.00		
2,826	1.00		
2,944	0.60		
3,000	1.00		
3,072	0.20		
3,169	0.90		
3,233	0.60		
3,391	0.60		
3,551	0.40		
3,711	0.50		
3,904	0.40		
4,064	0.20		
4,224	0.50		
4,416	0.50		
4,543	0.30		
4,702	0.10		
4,860	0.50		

JUN 02 2008
OCD-ARTESIA

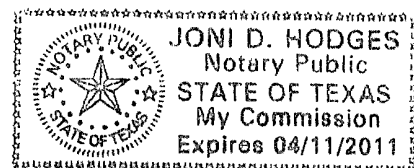
BY:

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on
Moore on behalf of Patterson-UTI Drilling Company LLC.

Notary Public for Midland County, Texas
My Commission Expires. 4/11/11

April 22nd, 2008 , by Steve



TARGET DETAILS

OPERATOR:	CHESAPEAKE	Supervisors:	TARGET N-S	Directional	0.00
WELL:	IMC 21 FED COM #2H	RICK MAST	TARGET E-W		0.00
LOCATION:	EDDY COUNTY NEW MEXICO	BILLY CARTER	TARGET RADIUS		0.00
JOB NUMBER:	MI-08103	R.JIMENEZ	TARGET DISPLACEMENT		0.00
COMMENTS:	J.PENA	TARGET CLOSURE			0.00

CHESAPEAKE
IMC 21 FED COM #2H
EDDY COUNTY NEW MEXICO
MI-08103
COMMENTS:

Supervisors:
RICK MAST
BILLY CARTER
R.JIMENEZ
J.PENA

Parameter	Value	Unit
TOTAL CORR.(-/+)	8.02	DIP DEG UP+DN-
GRID CORR.(-/+)	-0.18	DIP AZ
MAG DEC.(-/+)	8.19	TARGET TVD
		TARGET CLOSURE
		TARGET DISPLACEMENT
		TARGET RADIUS
		TARGET E-W
		TARGET N-S
		Directional
		Horizontal
	182.90	
	0.00	

TIME: 1:37 PM

PROPOSED DIRECTION 182.90 TARGET TRACKING

SVY	NUM	MD	INC	TRUE AZM	TVD	SECT	N-S	E-W	DLS/ 100	TO CENTER ABOVE(+) RIGHT(+) BELOW(-) LEFT(-)	DIR CLOSURE (DEG AZ)	CLOSURE DISTANCE (FEET)	BUILD RATE/ %/100'	WALK RATE/ %/100'
1	6020	0.80	207.90	-36.79	37.17	-6.44	2.58	541.37	8.31	350.17	37.72	0.08	2.58	-1.36
2	6050	1.40	186.60	-36.24	36.62	-6.56	2.39	511.36	8.42	349.81	37.20	2.00	-1.36	-1.97
3	6082	4.40	174.10	-34.63	35.01	-6.50	9.53	479.42	8.26	349.48	35.60	9.36	-1.97	-1.27
4	6114	8.20	170.40	-31.19	31.53	-5.99	11.94	447.62	7.68	349.24	32.10	11.88	-1.27	-1.97
5	6146	11.80	171.50	-25.75	26.05	-5.13	11.27	416.11	6.44	348.57	26.55	11.25	-2.45	-2.45
6	6178	15.70	169.70	-18.33	18.55	-3.87	12.26	386.03	4.80	348.22	18.95	12.19	6.24	5.54
7	6210	19.60	173.30	-6.82	8.95	-2.47	12.65	354.55	2.92	344.59	9.29	12.19	6.24	5.54
8	6242	23.30	176.00	6236.23	2.76	-2.70	11.96	324.77	1.26	207.43	3.04	11.56	6.24	5.54
9	6274	27.30	180.20	6265.16	16.38	-16.35	13.69	295.64	0.15	183.44	16.38	12.50	10.26	10.26
10	6306	31.00	182.40	6293.10	31.96	-31.93	12.04	267.90	-0.26	182.43	31.96	11.56	6.12	6.12
11	6338	34.40	182.90	6320.03	49.24	-49.20	10.66	240.97	-0.34	182.51	49.25	10.63	1.54	-0.34
12	6370	37.50	182.80	6345.93	58.03	-67.96	9.59	215.07	-0.55	182.60	68.03	9.59	-0.34	-0.72
13	6402	40.70	182.60	6370.76	88.21	-88.12	10.01	150.24	-0.42	182.62	88.21	10.00	-0.72	-0.39
14	6434	44.30	182.50	6394.35	109.82	-109.71	11.25	166.65	-0.53	182.61	109.82	11.25	-0.39	4.93
15	6466	47.70	183.70	6416.57	132.84	-132.69	10.96	144.43	-0.47	182.70	132.84	10.63	4.93	-3.03
16	6498	50.80	183.00	6437.46	157.07	-156.89	9.83	123.54	-0.28	182.80	157.07	9.69	-3.03	-1.48
17	6530	53.80	182.70	6457.03	182.39	-182.17	9.40	103.97	-0.31	182.80	182.39	9.37	-1.36	-1.09
18	6562	57.50	182.00	6475.06	208.80	-208.57	11.70	85.92	-0.56	182.75	208.80	11.56	-3.30	-1.70
19	6594	61.90	181.70	6491.22	236.42	-236.17	13.77	69.78	-1.07	182.64	236.42	13.75	-1.48	2.25
20	6626	66.00	182.30	6505.27	265.16	-264.90	12.92	55.73	-1.52	182.57	265.16	12.81	3.08	4.24
21	6658	69.90	182.50	6517.28	294.81	-294.53	13.14	43.72	-1.78	182.55	294.82	12.19	1.06	-1.63
22	6690	73.70	182.20	6527.28	325.21	-324.89	11.91	33.72	-2.07	182.54	325.21	11.88	-1.63	-1.09
23	6715	76.70	182.80	6533.66	349.37	-349.04	12.22	27.34	-2.24	182.53	349.36	12.00	4.24	1.70
24	6748	80.00	182.60	6540.32	381.69	-381.32	10.02	20.68	-2.35	182.55	381.69	10.00	-1.09	2.25
25	6780	83.60	182.90	6544.69	413.36	-412.95	11.29	16.11	-2.43	182.56	413.36	11.25	1.70	2.25
26	6812	85.90	183.40	6547.81	445.22	-444.76	12.23	13.19	-2.25	182.60	445.22	7.19	2.25	2.25

TARGET DETAILS

SURVEY CALCULATION PROGRAM

V1 00 02

OPERATOR:
WELL:
LOCATION:
JOB NUMBER:

CHESAPEAKE
IMC 21 FED COM #2H
EDDY COUNTY NEW MEXICO
MI-08103

COMMENTS:

Supervisors:
RICK MAST
BILLY CARTER
R.JIMENEZ
J.PENA

TARGET N-S
Directional
0.00
TARGET E-W
0.00
TARGET RADIUS
0.00
TARGET DISPLACEMENT
0.00
TARGET CLOSURE
0.00
MAG DEC.(+/-)
8.19
GRID CORR.(+/-)
-0.18
TOTAL CORR.(+/-)
8.02
DIP DEG UP+/DN-
0.00
DIP AZ
182.90
Horizontal
6561.00
WALK
90.00

DATE: 04/25/08
TIME: 1:31 PM
PROPOSED DIRECTION 182.90
MINIMUM CURVATURE CALCULATIONS(SPE-3362)

SVY
NUM
MD
INC
AZM
TVD
SECT
N-S
E-W
DLS/
100
TO CENTER
TARGET TRACKING
CLOSURE CLOSURE
DIR DISTANCE
BUILD
RATE/
WALK
RATE/
%100'

27	6844	87.70	184.10	6549.60	477.16	-476.64	-22.32	6.03	11.40	-1.82	182.68	477.17	5.62	3.99
28	6876	89.20	184.80	6550.47	509.14	-508.54	-24.80	5.17	10.53	-0.96	182.79	509.14	4.69	4.00
29	6908	90.60	185.50	6550.52	541.11	-540.41	-27.68	4.89	10.48	0.30	182.93	541.11	4.36	4.00
30	6939	90.60	185.20	6550.20	572.08	-571.27	-30.57	0.97	10.80	1.63	183.06	572.09	0.00	-1.77
31	6971	91.50	184.30	6549.61	604.06	-603.15	-33.22	3.98	11.39	2.66	183.15	604.07	2.81	-5.14
32	7003	91.60	183.40	6548.75	636.04	-635.07	-35.36	2.83	12.25	3.19	183.19	636.05	0.31	-5.14
33	7035	91.60	183.00	6547.85	668.03	-667.01	-37.15	1.25	13.15	3.36	183.19	668.04	0.00	-2.29
34	7068	91.70	183.10	6546.90	701.02	-699.95	-38.91	0.43	14.10	3.44	183.18	701.03	0.56	-1.77
35	7099	91.30	182.80	6545.09	732.01	-730.59	-40.50	1.61	14.91	3.47	183.17	732.01	-1.29	-2.95
36	7130	91.20	182.30	6545.41	763.00	-761.86	-41.88	1.64	15.59	3.23	183.15	763.01	-0.32	-4.00
37	7162	89.30	181.60	6545.27	794.99	-793.83	-42.97	6.33	15.73	2.75	183.10	795.00	-5.94	-2.29
38	7194	87.40	182.00	6545.20	826.97	-825.80	-43.97	6.07	14.80	2.14	183.05	826.97	-5.94	1.14
39	7227	88.30	181.90	6547.43	859.94	-858.76	-45.09	2.74	13.57	1.59	183.01	859.94	2.73	-0.55
40	7259	89.80	182.10	6547.96	891.93	-890.74	-46.21	4.73	13.04	1.09	182.97	891.93	4.69	0.57
41	7291	90.20	181.70	6547.55	923.93	-922.72	-47.27	1.77	13.04	0.53	182.93	923.93	1.25	-2.29
42	7323	89.50	181.60	6548.05	955.92	-954.71	-48.19	2.21	12.95	-0.17	182.89	955.92	-2.19	-0.57
43	7355	87.70	181.30	6548.83	987.90	-985.68	-49.00	5.70	12.17	-0.98	182.84	987.90	-5.62	-1.71
44	7387	87.60	181.40	6550.14	1019.86	-1018.65	-49.76	0.44	10.86	-1.84	182.80	1019.86	-0.31	0.57
45	7419	88.80	181.30	6551.15	1051.83	-1050.62	-50.51	3.76	9.85	-2.71	182.75	1051.84	3.75	-0.57
46	7451	90.70	181.80	6551.29	1083.82	-1082.61	-51.38	6.14	9.71	-3.46	182.72	1083.83	5.94	2.86
47	7483	90.90	181.90	6550.84	1115.81	-1114.59	-52.41	0.70	10.16	-4.05	182.69	1115.82	0.63	0.57
48	7515	90.40	181.80	6550.48	1147.81	-1146.57	-53.44	1.59	10.52	-4.64	182.67	1147.82	-1.56	-0.57
49	7547	90.30	181.50	6550.28	1179.80	-1178.56	-54.36	0.99	10.72	-5.33	182.64	1179.81	-0.31	-1.71
50	7579	88.90	182.00	6550.51	1211.79	-1210.54	-55.34	4.65	10.49	-5.98	182.62	1211.80	-4.33	2.86
51	7611	88.20	182.00	6551.31	1243.78	-1242.51	-56.45	2.19	9.69	-6.48	182.60	1243.79	-2.19	0.00
52	7643	88.00	181.70	6552.38	1275.75	-1274.48	-57.49	1.13	8.62	-7.06	182.58	1275.77	-0.62	-1.71
53	7675	88.60	182.00	6553.33	1307.73	-1306.45	-58.52	2.10	7.67	-7.65	182.56	1307.76	1.87	1.71

SURVEY CALCULATION PROGRAM

TARGET DETAILS

v1 c0 c2

OPERATOR:

CHESAPEAKE

Supervisors:

TARGET N-S

0.00

WELL:

IMC 21 FED COM #2H

RICK MAST

TARGET E-W

0.00

LOCATION:

EDDY COUNTY NEW MEXICO

BILLY CARTER

TARGET RADIUS

0.00

JOB NUMBER:

MI-08103

R. JIMENEZ

TARGET DISPLACEMENT

0.00

COMMENTS:

J. PENA

TARGET CLOSURE

0.00

5561.00

182.90

000

3

DATE: 04/25/08

TIME: 1:31 PM

MINIMUM CURVATURE CALCULATIONS(SPE-3362)

TARGET TRACKING

182.90

PROPOSED DIRECTION

PROPOSE

SVY NUM	TRUE			TVD	SECT	N-S	E-W	DLS/ 100	TO CENTER		CLOSURE		BUILD RATE/ °/100'	WALL RATE/ °/100'
	MD	INC	AZM						ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	DIR (DEG AZ)	CLOSURE DISTANCE (FEET)		
54	7707	89.30	181.90	6553.91	1339.72	-1338.42	-59.61	2.21	7.05	-8.18	182.55	1339.75	2.19	-3.57
55	7739	87.70	181.50	6554.75	1371.70	-1370.40	-60.56	5.15	6.25	-8.65	182.53	1371.73	-5.00	-2.29
56	7771	87.50	181.50	6555.09	1403.67	-1402.36	-61.40	0.63	4.91	-9.63	182.51	1403.70	-0.62	0.00
57	7803	87.40	181.70	6557.51	1435.63	-1434.31	-62.29	0.70	3.49	-10.36	182.49	1435.66	-0.31	1.14
58	7835	86.40	181.80	6559.24	1467.57	-1466.25	-63.26	3.14	1.76	-11.00	182.47	1467.61	-3.12	0.57
59	7867	85.80	181.20	6561.42	1499.49	-1498.16	-64.10	2.65	-0.42	-11.78	182.45	1499.54	-1.87	-3.42
60	7899	86.40	182.00	6563.60	1531.41	-1530.08	-64.99	3.12	-2.60	-12.50	182.43	1531.46	1.87	4.56
61	7931	87.40	183.70	6565.33	1563.36	-1561.99	-66.58	6.16	-4.33	-12.53	182.44	1563.41	3.12	9.70
62	7963	87.80	183.90	6566.67	1595.33	-1593.89	-68.70	1.40	-5.67	-12.03	182.47	1595.37	1.25	1.14
63	7995	88.70	184.10	6567.64	1627.30	-1625.80	-70.93	2.88	-6.64	-11.41	182.50	1627.34	2.81	1.14
64	8027	89.10	183.90	6568.26	1659.29	-1657.71	-73.16	1.40	-7.26	-10.80	182.53	1659.33	1.25	-1.14
65	8059	89.80	184.00	6568.57	1691.29	-1689.64	-75.37	2.21	-7.57	-10.21	182.55	1691.32	2.19	0.57
66	8091	90.50	183.40	6568.48	1723.28	-1721.57	-77.43	2.88	-7.48	-9.77	182.58	1723.31	2.19	-3.43
67	8123	89.60	182.90	6568.45	1755.22	-1753.52	-79.19	3.22	-7.45	-9.63	182.59	1755.31	-2.81	-2.86
68	8155	89.10	182.70	6568.82	1787.28	-1785.42	-80.75	1.68	-7.82	-9.68	182.59	1787.31	-1.56	-1.14
69	8187	89.00	182.60	6569.35	1819.27	-1817.44	-82.23	0.44	-8.35	-9.82	182.59	1819.30	-0.31	-0.57
70	8219	90.70	182.70	6569.43	1851.27	-1849.41	-83.71	5.32	-8.43	-9.96	182.59	1851.30	5.31	0.57
71	8251	91.80	182.00	6568.73	1883.26	-1881.37	-85.02	4.07	-7.73	-10.27	182.59	1883.29	3.44	-4.00
72	8281	89.90	181.90	6568.29	1915.25	-1911.35	-86.04	6.34	-7.29	-10.77	182.58	1913.28	-6.33	-0.61
73	8313	89.60	181.60	6568.43	1945.25	-1943.33	-87.02	1.33	-7.43	-11.41	182.56	1945.28	-0.94	-1.71
74	8344	88.50	182.10	6568.94	1976.24	-1974.31	-88.02	3.90	-7.94	-11.98	182.55	1976.27	-3.55	2.95
75	8376	87.50	182.40	6570.06	2008.22	-2006.27	-89.28	3.26	-9.06	-12.34	182.55	2008.25	-3.12	1.71
76	8409	86.50	182.00	6571.79	2041.17	-2039.20	-90.54	3.26	-10.79	-12.74	182.54	2041.21	-3.03	-2.21
77	8441	85.80	181.70	6573.93	2073.09	-2071.11	-91.57	2.38	-12.93	-13.33	182.53	2073.13	-2.19	-1.71
78	8473	86.10	181.50	6575.19	2105.00	-2103.02	-92.46	1.13	-15.19	-14.05	182.52	2105.05	0.94	-1.14
79	8505	87.20	182.00	6578.06	2136.94	-2134.95	-93.44	3.77	-17.06	-14.69	182.51	2136.99	3.44	2.85
80	8537	89.30	182.90	6579.04	2168.92	-2166.90	-94.81	7.14	-18.04	-14.94	182.51	2168.97	6.66	5.14

TARGET DETAILS

SURVEY CALCULATION PROGRAM

VI 00 02

OPERATOR:
WELL:
LOCATION:
JOB NUMBER:

CHESAPAKE
IMC 21 FED COM #2H
EDDY COUNTY NEW MEXICO
MI-08103

COMMENTS:

Supervisors:
RICK MAST
BILLY CARTER
RJIMENEZ
J.PENA

TARGET N-S
Directional
0.00
TARGET E-W
0.00
TARGET RADIUS
0.00
TARGET DISPLACEMENT
0.00
TARGET CLOSURE
0.00
Horizontal
5561.00
DIP AZ
182.90
DIP DEG UP/DN-
0.00
TARGET INCLINATION
90.00

DATE: 04/25/08
TIME: 1:21 PM
PROPOSED DIRECTION 182.90
TO CENTER
TARGET TRACKING
CLOSURE CLOSURE
DIR DISTANCE
(DEG AZ) (FEET)
%100' %100'
WALK RATE/
%100'

SVY	NUM	MD	INC	AZM	TRUE	TVD	SECT	N-S	E-W	DLS/	ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)	DIR	DISTANCE	RATE/	RATE/
81	8569	89.40	182.90	6579.40	2200.92	-2198.86	-96.43	0.31	-16.40	100	BELOW(-)	14.94	182.51	2200.97	0.31	0.00
82	8601	89.80	182.30	6579.63	2232.92	-2230.82	-97.88	2.25	-18.63	2.25	-15.11	182.51	2232.97	1.25	-3.43	5.72
83	8633	91.00	183.30	6579.40	2264.92	-2262.76	-99.44	4.88	-18.40	2.50	-15.17	182.52	2264.97	3.75	-2.50	0.00
84	8665	90.20	183.30	6579.07	2296.91	-2294.73	-101.28	2.50	-18.07	2.87	-14.86	182.53	2296.96	-2.33	-3.05	3.43
85	8695	89.50	182.80	6579.15	2326.91	-2324.68	-102.88	2.87	-18.15	2.87	-14.86	182.53	2326.96	-2.33	-3.05	3.43
86	8727	90.10	183.40	6579.26	2358.91	-2356.64	-104.61	2.65	-18.26	2.65	-14.75	182.54	2358.96	1.87	-0.94	0.57
87	8759	89.80	183.50	6579.29	2390.91	-2388.58	-106.54	0.99	-18.29	2.38	-14.45	182.55	2390.96	2.19	1.71	1.71
88	8791	90.50	183.80	6579.20	2422.91	-2420.51	-108.57	2.38	-18.20	3.22	-14.03	182.57	2422.96	2.19	1.71	1.71
89	8823	92.30	184.10	6578.42	2454.89	-2452.43	-110.78	5.70	-17.42	12.44	-5.74	182.59	2454.93	5.62	-1.71	-1.71
90	8855	92.30	184.30	6577.14	2486.86	-2484.32	-113.12	0.62	-16.14	1.59	-8.87	182.61	2486.89	0.00	1.14	1.14
91	8886	92.90	185.10	6575.73	2517.81	-2515.18	-115.66	3.22	-14.73	1.59	-8.87	182.63	2517.84	1.94	4.72	4.72
92	8919	92.70	185.40	6574.12	2550.74	-2548.00	-118.67	1.09	-13.12	1.09	-10.39	182.67	2550.76	-0.61	1.66	1.66
93	8950	92.40	185.10	6572.74	2581.69	-2578.84	-121.51	1.37	-11.74	1.37	-9.12	182.70	2581.70	-0.97	-1.77	-1.77
94	8983	92.50	184.90	6571.30	2614.63	-2611.68	-124.38	0.86	-10.30	1.59	-8.87	182.73	2614.64	0.61	-1.11	-1.11
95	9014	92.70	184.30	6569.87	2645.59	-2642.55	-126.86	1.96	-8.87	1.96	-8.99	182.75	2645.59	0.32	-3.54	-3.54
96	9046	92.20	184.20	6568.50	2677.55	-2674.43	-129.23	1.59	-7.50	1.59	-8.24	182.77	2677.55	-1.56	-0.57	-0.57
97	9078	88.30	183.40	6568.36	2709.54	-2706.36	-131.35	12.44	-7.36	1.59	-8.74	182.78	2709.54	-12.19	-4.57	-4.57
98	9110	88.20	183.20	6569.34	2741.52	-2738.29	-133.19	0.70	-8.34	0.70	-8.52	182.78	2741.53	-0.31	-1.14	-1.14
99	9142	89.70	182.80	6569.92	2773.51	-2770.24	-134.87	4.85	-8.52	4.85	-5.46	182.79	2773.52	4.69	-2.29	-2.29
100	9174	90.90	182.50	6569.76	2805.51	-2802.20	-136.35	3.87	-8.76	3.87	-5.60	182.79	2805.52	3.75	-1.71	-1.71
101	9206	91.40	182.40	6569.11	2837.51	-2834.17	-137.71	1.59	-8.11	1.59	-5.85	182.78	2837.51	1.56	-0.57	-0.57
102	9238	91.60	181.80	6568.28	2869.49	-2866.13	-138.89	1.98	-7.28	1.98	-6.30	182.77	2869.50	0.63	-3.43	-3.43
103	9270	91.80	181.30	6567.33	2901.47	-2898.11	-139.75	1.68	-6.33	1.68	-7.05	182.76	2901.48	0.62	-2.86	-2.86
104	9302	88.90	180.60	6567.13	2933.44	-2930.10	-140.28	9.32	-5.13	9.32	-8.14	182.74	2933.46	-9.06	-4.00	-4.00
105	9334	88.00	180.50	6568.00	2965.41	-2962.09	-140.59	2.83	-7.00	2.83	-9.45	182.72	2965.42	-2.81	-0.57	-0.57
106	9366	88.30	180.50	6569.03	2997.36	-2994.07	-140.87	0.94	-8.03	0.94	-10.79	182.69	2997.38	0.94	0.00	0.00
107	9398	88.90	180.30	6569.81	3029.32	-3026.06	-141.09	1.98	-8.81	1.98	-12.19	182.67	3029.35	1.88	-1.14	-1.14

SURVEY CALCULATION PROGRAM

TARGET DETAILS

v1.00.02

OPERATOR:

CHESAPEAKE

WELL:

IMC 21 FED COM #2H

LOCATION:

EDDY COUNTY NEW MEXICO

JOB NUMBER:

MI-08103

Supervisors:

RICK MAST

BILLY CARTER

R.JIMENEZ

J.PENA

COMMENTS:

MAG DEC.(-/+)
GRID CORR.(-/+)
TOTAL CORR.(-/+)8.19
-0.18
8.02

DATE: 04/25/08

TIME: 1:31 PM

MINIMUM CURVATURE CALCULATIONS(SPE-3362)

TARGET TRACKING

182.90

SVY NUM	MD	INC	TRUE AZIM	TVD	SECT	N-S	E-W	DLS/ 100	TO CENTER ABOVE(+) RIGHT(+) BELOW(-) LEFT(-)	CLOSURE DIR (DEG AZ)	CLOSURE DISTANCE (FEET)	BUILD RATE/ %/100'	WALK RATE/ %/100'
108	9430	89.40	180.40	6570.29	3061.29	-3058.05	-141.29	1.53	-9.29	182.65	3061.32	1.56	0.57
109	9462	90.20	180.10	6570.40	3093.25	-3090.05	-141.43	2.67	-9.40	182.62	3093.29	2.50	-1.71
110	9494	91.00	179.60	6570.06	3125.20	-3122.05	-141.34	2.95	-9.06	182.59	3125.25	2.50	-2.86
111	9526	90.90	179.60	6569.53	3157.15	-3154.05	-141.12	0.31	-8.53	182.55	3157.20	-0.31	0.00
112	9558	89.40	180.30	6569.45	3189.10	-3185.04	-141.09	5.17	-8.45	182.54	3189.17	-4.69	4.00
113	9590	88.60	181.50	6570.01	3221.08	-3218.03	-141.59	4.51	-9.01	182.52	3221.15	-2.50	6.86
114	9622	89.10	181.70	6570.65	3253.06	-3250.02	-142.49	1.68	-9.65	182.51	3253.14	1.56	1.14
115	9653	88.80	182.00	6571.22	3284.05	-3280.99	-143.49	1.37	-10.22	182.50	3284.13	-0.57	1.77
116	9685	89.20	183.10	6571.78	3316.05	-3312.96	-144.91	3.66	-10.78	182.50	3316.13	1.25	6.29
117	9717	90.60	183.50	6571.83	3348.04	-3344.90	-146.75	4.55	-10.83	182.51	3348.12	4.38	2.29
118	9744	90.00	183.60	6571.69	3375.04	-3371.85	-148.43	2.25	-10.69	182.52	3375.12	-2.22	0.68
119	9776	89.60	183.80	6571.80	3407.04	-3403.78	-150.49	1.40	-10.80	182.53	3407.11	-1.25	1.14
120	9808	88.30	184.40	6572.39	3439.03	-3435.70	-152.78	4.47	-11.39	182.55	3439.09	-4.06	3.43
121	9840	88.70	184.80	6573.23	3471.00	-3467.58	-155.34	1.77	-12.23	182.57	3471.06	1.25	2.29
122	9872	89.80	184.40	6573.65	3502.98	-3499.43	-157.91	3.66	-12.65	182.58	3503.04	3.44	-2.29
123	9904	89.70	184.50	6573.78	3534.97	-3531.38	-160.39	0.44	-12.78	182.60	3535.02	-0.31	0.57
124	9935	89.50	184.50	6574.00	3565.95	-3562.22	-162.82	0.65	-13.00	182.62	3566.00	-0.65	0.00
125	9967	89.00	184.10	6574.42	3597.95	-3594.19	-165.22	2.00	-13.42	182.63	3597.98	-1.56	-2.29
126	9999	90.00	184.10	6574.70	3629.94	-3626.11	-167.51	3.13	-13.70	182.64	3629.97	3.12	0.00
127	10031	90.00	184.20	6574.70	3661.93	-3658.02	-169.83	0.31	-13.70	182.66	3661.96	0.00	0.57
128	10063	91.30	184.60	6574.34	3693.92	-3689.92	-172.28	4.25	-13.34	182.67	3693.94	4.06	2.29
129	10096	92.00	184.20	6573.39	3726.89	-3722.81	-174.81	2.44	-12.39	182.68	3726.92	2.12	-2.22
130	10138	93.20	183.70	6571.48	3768.84	-3764.67	-177.70	3.06	-10.48	182.70	3768.86	2.86	-2.18
131	10171	92.10	183.80	6569.96	3801.80	-3797.56	-179.86	3.35	-8.96	182.71	3801.82	-3.33	0.55
132	10202	92.00	183.40	6568.85	3832.78	-3828.46	-181.80	1.33	-7.85	182.72	3832.80	-0.32	-2.36
133	10234	92.00	183.40	6567.73	3864.76	-3860.41	-185.70	0.00	-6.73	182.72	3864.77	0.00	0.00
134	10266	92.30	183.60	6566.53	3896.73	-3892.32	-185.65	1.13	-5.53	182.73	3896.75	0.94	1.14

SURVEY CALCULATION PROGRAM

TARGET DETAILS

OPERATOR: CHESAPEAKE
WELL: IMC 21 FED COM #2H
LOCATION: EDDY COUNTY NEW MEXICO
JOB NUMBER: MI-08103
COMMENTS:

Supervisors:
 RICK MAST
 BILLY CARTER
 R.JIMENEZ
 J.PENA

v1 C0.02

TARGET N-S Directional 0.00
TARGET E-W 0.00
TARGET RADIUS 0.00
TARGET DISPLACEMENT 0.00
TARGET CLOSURE 0.00
TARGET TVD Horizontal 6561.00
DIP AZ 182.90
DIP DEG UP+/DN- 0.00
TARGET INCLINATION 90.00

MAG DEC.(-/+) 8.19
GRID CORR.(-/+) -0.18
TOTAL CORR.(-/+) 8.02

DATE: 04/25/08

TIME: 1:31 PM

MINIMUM CURVATURE CALCULATIONS(SPE-3362)

PROPOSED DIRECTION 182.90

TARGET TRACKING

SVY NUM	MD	INC	TRUE		SECT	N-S	E-W	DLS/ 100	TO CENTER		CLOSURE DIR (DEG AZ)	CLOSURE DISTANCE (FEET)	BUILD RATE/ %/100'	WALK RATE/ %/100'
			AZM	TVD					ABOVE(+) BELOW(-)	RIGHT(+) LEFT(-)				
135	10298	93.10	183.60	6565.02	3928.69	-3924.23	-187.66	2.50	-4.02	-11.12	182.74	3928.71	2.50	0.00
136	10331	93.20	183.60	6563.21	3961.64	-3957.11	-189.73	0.30	-2.21	-10.72	182.75	3961.66	0.30	0.00
137	10363	92.00	184.10	6561.76	3993.60	-3989.00	-191.88	4.06	-0.76	-10.19	182.75	3993.62	-3.75	2.85
138	10395	90.50	185.40	6561.06	4025.58	-4020.89	-194.52	6.20	-0.06	-9.15	182.77	4025.59	-4.69	7.43
139	10427	89.10	185.20	6561.17	4057.55	-4052.75	-197.48	4.42	-0.17	-7.81	182.79	4057.56	-4.38	-1.14
140	10459	89.10	185.40	6561.67	4089.52	-4084.61	-200.44	0.62	-0.67	-6.47	182.81	4089.52	0.00	1.14
141	10491	90.30	186.60	6561.84	4121.47	-4116.43	-203.78	5.30	-0.84	-4.74	182.83	4121.47	3.75	6.86
142	10523	91.10	186.50	6561.45	4153.40	-4146.22	-207.43	2.52	-0.45	-2.71	182.86	4153.40	2.50	-0.57
143	10555	91.00	185.90	6560.86	4185.34	-4180.03	-210.89	1.90	0.14	-0.86	182.89	4185.34	-0.31	-3.43
144	10587	90.30	185.90	6560.50	4217.30	-4211.85	-214.17	2.19	0.50	0.81	182.91	4217.30	-2.19	0.00
145	10619	90.00	185.20	6560.42	4249.26	-4243.70	-217.27	2.38	0.58	2.29	182.93	4249.26	-0.94	-4.00
146	10651	91.40	185.60	6560.03	4281.23	-4275.56	-220.28	4.55	0.97	3.69	182.95	4281.23	4.93	2.29
147	10683	91.90	184.60	6559.10	4313.19	-4307.42	-223.12	3.49	1.90	4.91	182.97	4313.19	1.56	-5.71
148	10715	91.40	185.30	6558.18	4345.16	-4339.29	-225.88	2.69	2.82	6.06	182.98	4345.16	-1.56	4.00
149	10747	92.10	185.60	6557.21	4377.11	-4371.13	-228.92	2.38	3.79	7.48	183.00	4377.12	2.19	1.71
150	10779	91.90	185.80	6556.09	4409.05	-4402.95	-232.10	0.88	4.91	9.04	183.02	4409.06	-0.62	1.14
151	10793	91.30	185.60	6555.70	4423.03	-4416.87	-233.49	4.52	5.30	9.73	183.03	4423.04	-4.29	-2.61
bit	10846	91.30	185.60	6554.50	4475.96	-4469.81	-238.66	0.00	6.50	12.22	183.06	4475.97	0.00	0.00



Job Number: 081117505569 State/Country: New Mexico/USA
 Company: Chesapeake Operating, Inc. Declination: 8.01°
 Lease/Well: IMC 21 Federal Com., Well #2H Grid: East To Grid
 Location: Eddy County, New Mexico File name: F:\SURVEY\2008SU~1\CHESAP~1\IMC2H.SVY
 Rig Name: Patterson #142 Date/Time: 13-Mar-08 / 13:48
 RKB: Curve Name Surface - 5960' M D. (gyroscopic)
 G.L. or M.S.L.:

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane 182.90

Vertical Section Referenced to offset from Wellhead: EW =.00 Ft, NS=.00 Ft

Rectangular Coordinates Referenced to Wellhead

Measured	Incl	Drift	TRUE			Vertical	CLOSURE	CLOSURE	Dogleg
Depth	Angle	Direction	Vertical	N-S	E-W	Section	Distance	Direction	Severity
FT	Deg	Deg	Depth	FT	FT	FT	FT	Deg	Deg/100
0	0	0	0	0	0	0	0	0	0
200	0.25	317.16	200	0.32	-0.3	-0.3	0.44	317.16	0.12
400	0.5	281.54	400	0.81	-1.45	-0.74	1.66	299.35	0.17
600	0.5	345.92	599.99	1.84	-2.52	-1.71	3.11	306.12	0.27
800	0.25	340.61	799.98	3.09	-2.87	-2.94	4.22	317.12	0.13
1000	0.75	359.3	999.98	4.81	-3.03	-4.65	5.69	327.78	0.26
1200	0.75	44	1199.96	7.06	-2.14	-6.95	7.38	343.14	0.29
1400	1	38.38	1399.94	9.37	-0.15	-9.35	9.38	359.1	0.13
1600	0.75	62.22	1599.91	11.35	2.09	-11.44	11.54	10.45	0.22
1800	0.75	85.91	1799.9	12.06	4.56	-12.27	12.89	20.71	0.15
2000	0.75	162.6	1999.89	10.9	6.25	-11.2	12.57	29.85	0.47
2200	0.75	284.67	2199.88	9.98	5.38	-10.24	11.34	28.32	0.66
2400	1.25	304.36	2399.85	11.55	2.31	-11.65	11.77	11.33	0.3
2600	1	324.05	2599.81	14.19	-0.51	-14.15	14.2	357.93	0.23
2800	1	322.74	2799.78	16.99	-2.59	-16.84	17.19	351.32	0.01
3000	0.75	313.08	2999.75	19.27	-4.61	-19.02	19.82	346.56	0.14
3200	0.75	314.72	3199.74	21.09	-6.49	-20.73	22.07	342.89	0.01
3400	0.5	286	3399.73	22.25	-8.26	-21.8	23.74	339.63	0.2
3600	0	0	3599.72	22.49	-9.1	-22	24.26	337.97	0.25
3800	0.5	310.28	3799.72	23.06	-9.77	-22.53	25.04	337.04	0.25
4000	0.25	227.93	3999.72	23.33	-10.76	-22.75	25.69	335.25	0.26
4200	0.5	352.57	4199.71	23.9	-11.19	-23.3	26.39	334.91	0.34
4400	0.25	20.21	4399.71	25.18	-11.15	-24.58	27.54	336.1	0.15
4600	0.5	25.85	4599.71	26.37	-10.62	-25.8	28.43	338.06	0.13
4800	0.5	326.49	4799.7	27.88	-10.72	-27.3	29.87	338.96	0.25
5000	0.25	293.34	4999.7	28.78	-11.61	-28.16	31.04	338.04	0.16
5200	0.5	1.98	5199.69	29.83	-11.98	-29.18	32.14	338.12	0.24
5400	0.75	52.62	5399.68	31.5	-10.91	-30.9	33.33	340.9	0.29
5600	0.75	42.26	5599.66	33.26	-8.99	-32.76	34.45	344.88	0.07
5800	0.75	29.91	5799.65	35.36	-7.45	-34.94	36.14	348.1	0.08
5960	0.75	28.47	5959.63	37.19	-6.43	-36.82	37.74	350.19	0.01



Directional Services

Job Number: 081117505569

Company: Chesapeake Operating, Inc.

Lease/Well: IMC 21 Federal Com., Well #2H

Location: Eddy County, New Mexico

Rig Name: Patterson #142

RKB:

G.L. or M.S.L.:

State/Country: New Mexico/USA

Declination: 8.01°

Grid: East To Grid

File name: F:\SURVEY\2008SU~1\CHESAP~1\IMC2H.SVY

Date/Time: 13-Mar-08 / 13:57

Curve Name: Surface - 5960' M.D. (gyroscopic)

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 182.90
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
200.00	.25	317.16	200.00	.32	-.30	-.30	.44	317.16	.12
400.00	.50	281.54	400.00	.81	-1.45	-.74	1.66	299.35	.17
600.00	.50	345.92	599.99	1.84	-2.52	-1.71	3.11	306.12	.27
800.00	.25	340.61	799.98	3.09	-2.87	-2.94	4.22	317.12	.13
1000.00	.75	359.30	999.98	4.81	-3.03	-4.65	5.69	327.78	.26
1200.00	.75	44.00	1199.96	7.06	-2.14	-6.95	7.38	343.14	.29
1400.00	1.00	38.38	1399.94	9.37	-.15	-9.35	9.38	359.10	.13
1600.00	.75	62.22	1599.91	11.35	2.09	-11.44	11.54	10.45	.22
1800.00	.75	85.91	1799.90	12.06	4.56	-12.27	12.89	20.71	.15

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
2000.00	.75	162.60	1999.89	10.90	6.25	-11.20	12.57	29.85	.47
2200.00	.75	284.67	2199.88	9.98	5.38	-10.24	11.34	28.32	.66
2400.00	1.25	304.36	2399.85	11.55	2.31	-11.65	11.77	11.33	.30
2600.00	1.00	324.05	2599.81	14.19	-.51	-14.15	14.20	357.93	.23
2800.00	1.00	322.74	2799.78	16.99	-2.59	-16.84	17.19	351.32	.01
3000.00	.75	313.08	2999.75	19.27	-4.61	-19.02	19.82	346.56	.14
3200.00	.75	314.72	3199.74	21.09	-6.49	-20.73	22.07	342.89	.01
3400.00	.50	286.00	3399.73	22.25	-8.26	-21.80	23.74	339.63	.20
3600.00	.00	.00	3599.72	22.49	-9.10	-22.00	24.26	337.97	.25
3800.00	.50	310.28	3799.72	23.06	-9.77	-22.53	25.04	337.04	.25
4000.00	.25	227.93	3999.72	23.33	-10.76	-22.75	25.69	335.25	.26
4200.00	.50	352.57	4199.71	23.90	-11.19	-23.30	26.39	334.91	.34
4400.00	.25	20.21	4399.71	25.18	-11.15	-24.58	27.54	336.10	.15
4600.00	.50	25.85	4599.71	26.37	-10.62	-25.80	28.43	338.06	.13
4800.00	.50	326.49	4799.70	27.88	-10.72	-27.30	29.87	338.96	.25
5000.00	.25	293.34	4999.70	28.78	-11.61	-28.16	31.04	338.04	.16
5200.00	.50	1.98	5199.69	29.83	-11.98	-29.18	32.14	338.12	.24
5400.00	.75	52.62	5399.68	31.50	-10.91	-30.90	33.33	340.90	.29
5600.00	.75	42.26	5599.66	33.26	-8.99	-32.76	34.45	344.88	.07
5800.00	.75	29.91	5799.65	35.36	-7.45	-34.94	36.14	348.10	.08
Last Survey Depth Recorded									
5960.00	.75	28.47	5959.63	37.19	-6.43	-36.82	37.74	350.19	.01

IMC2H.TXT

Job Number: 081117505569	State/Country: New Mexico/USA
Company: Chesapeake Operating, Inc.	Declination: 8.01°
Lease/Well: IMC 21 Federal Com., Well #2H	Grid: East To Grid
Location: Eddy County, New Mexico	File name:
F:\SURVEY\2008SU~1\CHESAP~1\IMC2H.SVY	Date/Time: 13-Mar-08 / 13:57
Rig Name: Patterson #142	Curve Name: Surface - 5960' M.D.
RKB:	
(gyroscopic)	
G.L. or M.S.L.:	

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane 182.90

Vertical Section Referenced to offset from wellhead: EW =.00 Ft , NS=.00
Ft

Rectangular Coordinates Referenced to wellhead

Measured CLOSURE Depth Distance FT	Incl CLOSURE Angle Direction Deg	Drift Dogleg Direction Severity Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	FT
Deg	Deg/100						
.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00
.44	200.00	.25	317.16	200.00	.32	-.30	-.30
.44	317.16	.12	281.54	400.00	.81	-1.45	-.74
1.66	400.00	.50	345.92	599.99	1.84	-2.52	-1.71
3.11	299.35	.17	340.61	799.98	3.09	-2.87	-2.94
4.22	600.00	.50					
	306.12	.27					
	800.00	.25					
	317.12	.13					
5.69	1000.00	.75	359.30	999.98	4.81	-3.03	-4.65
	327.78	.26	44.00	1199.96	7.06	-2.14	-6.95
7.38	1200.00	.75	38.38	1399.94	9.37	-.15	-9.35
	343.14	.29					
9.38	1400.00	1.00					
	359.10	.13					

				IMC2H.TXT			
1600.00	.75	62.22	1599.91	11.35	2.09	-11.44	
11.54 10.45	.22						
1800.00	.75	85.91	1799.90	12.06	4.56	-12.27	
12.89 20.71	.15						
2000.00	.75	162.60	1999.89	10.90	6.25	-11.20	
12.57 29.85	.47						
2200.00	.75	284.67	2199.88	9.98	5.38	-10.24	
11.34 28.32	.66						
2400.00	1.25	304.36	2399.85	11.55	2.31	-11.65	
11.77 11.33	.30						
2600.00	1.00	324.05	2599.81	14.19	-.51	-14.15	
14.20 357.93	.23						
2800.00	1.00	322.74	2799.78	16.99	-2.59	-16.84	
17.19 351.32	.01						
3000.00	.75	313.08	2999.75	19.27	-4.61	-19.02	
19.82 346.56	.14						
3200.00	.75	314.72	3199.74	21.09	-6.49	-20.73	
22.07 342.89	.01						
3400.00	.50	286.00	3399.73	22.25	-8.26	-21.80	
23.74 339.63	.20						
3600.00	.00	.00	3599.72	22.49	-9.10	-22.00	
24.26 337.97	.25						
3800.00	.50	310.28	3799.72	23.06	-9.77	-22.53	
25.04 337.04	.25						
4000.00	.25	227.93	3999.72	23.33	-10.76	-22.75	
25.69 335.25	.26						
4200.00	.50	352.57	4199.71	23.90	-11.19	-23.30	
26.39 334.91	.34						
4400.00	.25	20.21	4399.71	25.18	-11.15	-24.58	
27.54 336.10	.15						
4600.00	.50	25.85	4599.71	26.37	-10.62	-25.80	
28.43 338.06	.13						
4800.00	.50	326.49	4799.70	27.88	-10.72	-27.30	
29.87 338.96	.25						

PAGE - 1

IMC2H.TXT

Measured CLOSURE Depth Distance FT	Incl CLOSURE Angle Direction Deg	Drift Dogleg Direction Severity Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	FT
5000.00		.25	293.34	4999.70	28.78	-11.61	-28.16
31.04	338.04	.16	1.98	5199.69	29.83	-11.98	-29.18
5200.00		.50	52.62	5399.68	31.50	-10.91	-30.90
32.14	338.12	.24	42.26	5599.66	33.26	-8.99	-32.76
5400.00		.75	29.91	5799.65	35.36	-7.45	-34.94
33.33	340.90	.29					
5600.00		.75					
34.45	344.88	.07					
5800.00		.75					
36.14	348.10	.08					
Last Survey Depth Recorded							
5960.00		.75	28.47	5959.63	37.19	-6.43	-36.82
37.74	350.19	.01					



Regulatory Department

Date 5/29/2008

JUN 02 2008
OCD-ARTESIA

8-7-08

New Mexico Oil Conservation Division
1301 W. Grand Ave.
Artesia, NM 88210

RE: IMC 21 Federal Com. # 2H
API # 30-015-36109
21-23S-29E
460' FNL & 410' FEL (surface hole location)
Eddy County, NM

Dear Sirs/Madams:

Chesapeake respectfully requests that the completion report and log for the subject well be held confidential for the maximum period of time. Please note that no other electric logs were ran in the well bore other than the electric log hereby submitted.

Yours truly,

Bryan G. Arrant
Chesapeake Energy Corp.
Senior Regulatory Compliance Specialist
Enterprise Plaza
Phone: 405-879-3782
Fax: 405-879-7911
E-mail: bryan.arrant@chk.com