



March 18, 2015

Devon Energy Production Co., L. P.
333 West Sheridan Ave
Oklahoma City, Oklahoma 73102-5010

15-42932

Attn: Megan Moravec

Re: Cotton Draw Unit 227H

Please find enclosed a copy of the survey from 0' to 4271.54' 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.

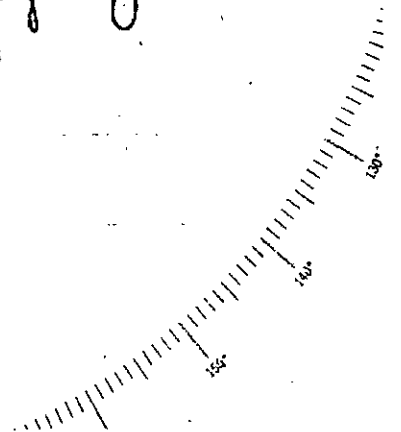
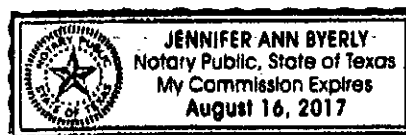
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

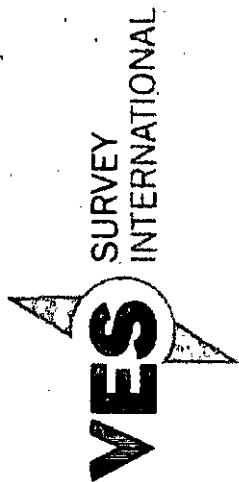
This instrument was acknowledged before me on the 18 day of March, A.D., 2015, by Keith Havelka.

Jennifer Ann Byerly
Notary Public, State of Texas





Company: Devon Energy
Lease/Well: Cotton Draw Unit/227H
Location: S11 T25S R31E
Rig Name: HP 223
State/County: New Mexico/Eddy
Latitude: 32.15, Longitude: -103.74
GRID North is 0.31 Degrees East of True North
VS-Azi: 0.00 Degrees



NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 20 2016
RECEIVED

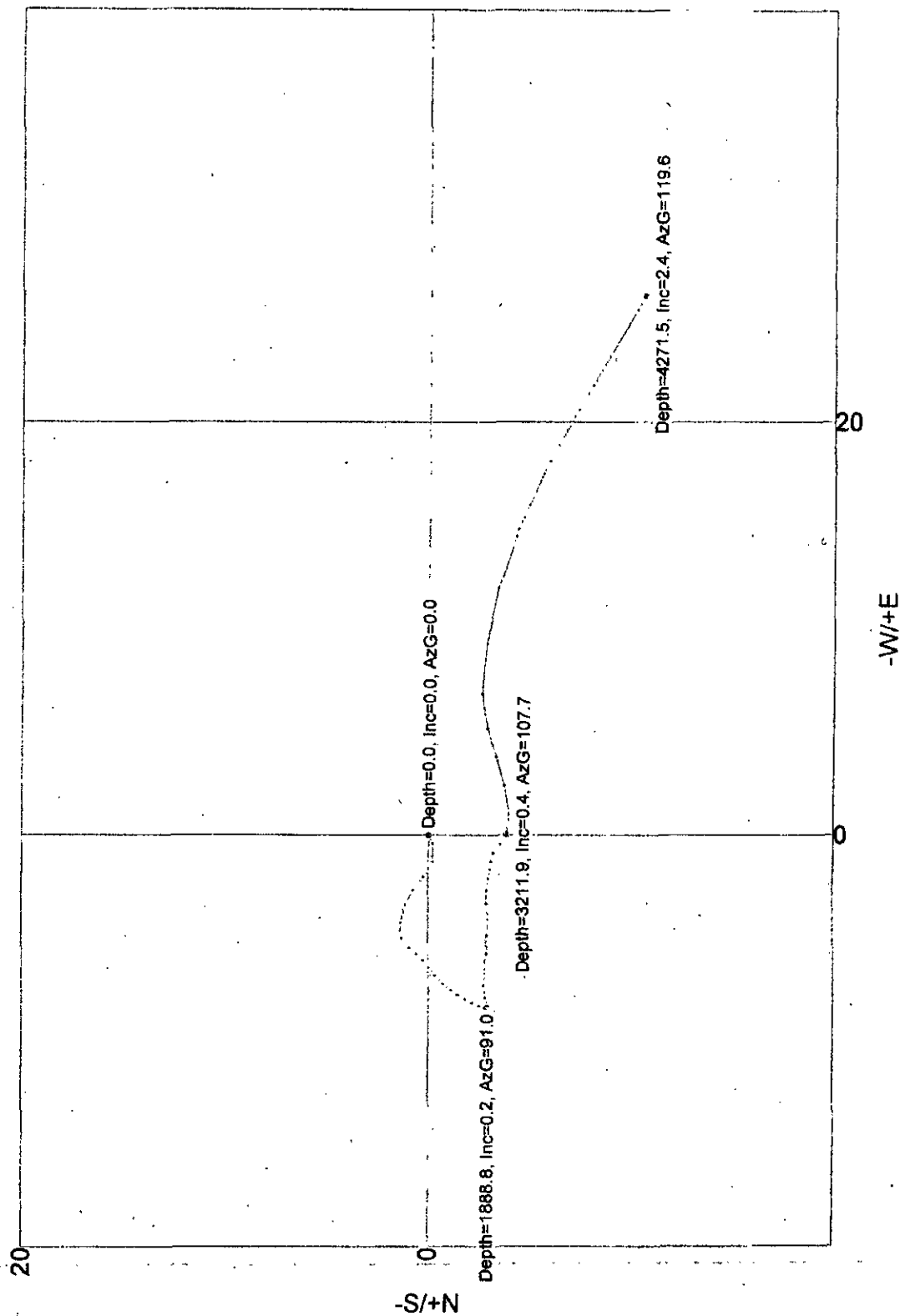
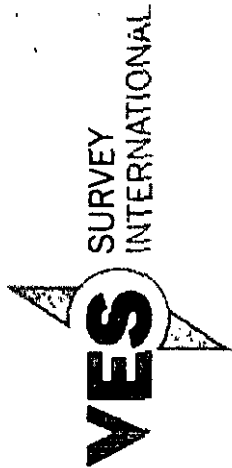
Depth Reference : RKB = 24 Feet
DRILLOG MS GYRO SURVEY CALCULATIONS
Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 3/18/2015 / 13:56
VES Survey International
Midland, TX
432-583-5444
Surveyor: Andrew Askew
Cotton Draw Unit 227H / API 30-015-42932

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	****
93.10	0.58	245.54	93.10	-0.20	-0.43	-0.20	0.47	245.54	0.62
187.61	0.56	294.92	187.60	-0.20	-1.29	-0.20	1.30	261.25	0.51
282.12	0.50	307.63	282.11	0.25	-2.03	0.25	2.05	276.99	0.14
376.63	0.49	308.43	376.62	0.75	-2.67	0.75	2.78	285.67	0.01
471.14	0.51	288.07	471.12	1.13	-3.39	1.13	3.57	288.45	0.19
565.65	0.58	281.31	565.63	1.35	-4.25	1.35	4.46	287.65	0.10
660.16	0.38	244.38	660.14	1.31	-5.01	1.31	5.18	284.67	0.38
754.67	0.30	215.21	754.64	0.97	-5.44	0.97	5.52	280.16	0.20
849.18	0.27	218.93	849.15	0.60	-5.72	0.60	5.75	276.02	0.04
943.69	0.30	233.64	943.66	0.29	-6.05	0.29	6.06	272.70	0.08
1038.20	0.31	235.05	1038.17	-0.01	-6.46	-0.01	6.46	269.95	0.01
1132.71	0.31	226.45	1132.68	-0.33	-6.85	-0.33	6.86	267.25	0.05
1227.22	0.32	221.89	1227.19	-0.70	-7.22	-0.70	7.25	264.44	0.03
1321.73	0.29	215.17	1321.70	-1.09	-7.53	-1.09	7.61	261.73	0.05
1416.24	0.24	218.86	1416.21	-1.45	-7.79	-1.45	7.93	259.48	0.05
1510.75	0.26	208.77	1510.71	-1.79	-8.02	-1.79	8.22	257.40	0.05
1605.26	0.24	208.12	1605.22	-2.16	-8.21	-2.16	8.49	255.28	0.03
1699.77	0.19	198.25	1699.73	-2.48	-8.35	-2.48	8.71	253.43	0.05

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
1794.28	0.16	203.01	1794.24	-2.76	-8.45	-2.76	8.89	251.92	0.04
1888.79	0.18	90.96	1888.75	-2.88	-8.35	-2.88	8.84	250.96	0.30
1983.30	0.34	69.38	1983.26	-2.79	-7.94	-2.79	8.42	250.66	0.19
2077.81	0.45	93.20	2077.77	-2.71	-7.32	-2.71	7.80	249.67	0.21
2172.32	0.50	95.07	2172.28	-2.77	-6.54	-2.77	7.10	247.06	0.06
2266.83	0.51	93.36	2266.78	-2.83	-5.71	-2.83	6.37	243.65	0.02
2361.34	0.50	95.67	2361.29	-2.89	-4.88	-2.89	5.67	239.33	0.02
2455.85	0.49	88.37	2455.80	-2.91	-4.07	-2.91	5.00	234.45	0.09
2550.36	0.42	89.90	2550.30	-2.88	-3.32	-2.88	4.40	229.06	0.07
2644.87	0.35	88.65	2644.81	-2.88	-2.69	-2.88	3.94	223.04	0.08
2739.38	0.34	105.51	2739.32	-2.94	-2.13	-2.94	3.63	215.86	0.11
2833.89	0.23	94.38	2833.83	-3.03	-1.67	-3.03	3.46	208.79	0.13
2928.40	0.24	94.43	2928.34	-3.08	-1.27	-3.06	3.32	202.59	0.01
3022.91	0.28	120.55	3022.85	-3.20	-0.87	-3.20	3.32	195.26	0.13
3117.42	0.33	138.58	3117.35	-3.52	-0.49	-3.52	3.55	187.97	0.11
3211.93	0.43	107.65	3211.86	-3.83	0.03	-3.83	3.83	179.62	0.24
3306.44	0.77	88.88	3306.37	-3.94	1.00	-3.94	4.06	165.68	0.41
3400.95	0.93	74.17	3400.87	-3.73	2.38	-3.73	4.42	147.42	0.29
3495.46	0.86	72.77	3495.38	-3.31	3.79	-3.31	5.03	131.07	0.08
3589.97	0.90	71.43	3589.86	-2.86	5.17	-2.86	5.91	118.94	0.05
3684.48	1.20	87.96	3684.36	-2.59	6.86	-2.59	7.33	110.68	0.45
3778.99	1.74	99.76	3778.84	-2.80	9.26	-2.80	9.67	106.81	0.65
3873.50	1.63	105.57	3873.31	-3.40	11.97	-3.40	12.44	105.87	0.21
3968.01	2.01	110.96	3967.77	-4.35	14.81	-4.35	15.43	106.38	0.44
4062.52	2.41	118.24	4062.21	-5.89	18.10	-5.89	19.04	108.01	0.52
4157.03	2.72	121.66	4156.62	-8.01	21.77	-8.01	23.19	110.19	0.37
4251.54	2.45	119.86	4251.04	-10.19	25.44	-10.19	27.40	111.82	0.30
4271.54	2.39	119.64	4271.02	-10.61	26.17	-10.61	28.24	112.06	0.31



VES Survey International
Midland, TX
432-563-5444
Surveyor: Andrew Askew
Cotton Draw Unit 227H / API 30-015-42932



V.E.S. Survey Date: 3/14/2015

Well Name: COTTON DRAW UNIT 227H

Sub-Division DELAWARE BASIN WEST		Region BASIN WEST	Field Name PADUCA		County EDDY	State/Province NM				
Surface Legal Location SEC 11 26S R31E		APN/BLN 3001542932	Latitude (°) 32° 9' 5.593" N	Longitude (°) 103° 44' 32.049" W	Orig KB Elevation (ft) 3,479.40	Ground Elev MSL (ft) 3,454.40	KB - DL (ft) 25.00			
Wellbore Name OH		Parent Wellbore OH	SAP Well ID 38055		Vertical Section Direction (°)					
Kick Offs & Key Depths										
Date 3/21/2015			Type Kick Off		Tool Depth (ft) 9,790.0					
Actual Deviation Survey EXTREME, Proposed? No			Definite? Yes	Proposed? No	Proposed Deviation Survey					
Deviation Survey										
Date 3/7/2015		Description EXTREME								
MD Tie In (ft) 0.00		TVD Tie In (ft) 0.00	Inclination Tie In (°) 0.00	Azimuth Tie In (°) 0.00	NS Tie In (ft) 0.00	EW Tie In (ft) 0.00				
Survey Data										
Date	MD (ft)	Incl (°)	Azm (°)	TVD (ft)	VS (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Survey Tool	Survey Company
3/17/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD	LEAM DRILLING SYSTEMS
3/17/2015	93.10	0.58	245.64	93.10	0.20	-0.20	-0.43	0.62	MWD	LEAM DRILLING SYSTEMS
3/17/2015	187.61	0.56	294.92	187.60	0.20	-0.20	-1.28	0.50	MWD	LEAM DRILLING SYSTEMS
3/17/2015	282.12	0.50	307.63	282.11	-0.25	0.25	-2.03	0.14	MWD	LEAM DRILLING SYSTEMS
3/17/2015	376.63	0.49	308.43	376.62	-0.75	0.75	-2.67	0.01	MWD	LEAM DRILLING SYSTEMS
3/17/2015	471.14	0.51	288.07	471.12	-1.13	1.13	-3.39	0.19	MWD	LEAM DRILLING SYSTEMS
3/17/2015	565.65	0.58	281.31	565.63	-1.35	1.38	-4.26	0.10	MWD	LEAM DRILLING SYSTEMS
3/17/2015	660.16	0.38	244.38	660.14	-1.31	1.32	-5.01	0.38	MWD	LEAM DRILLING SYSTEMS
3/17/2015	754.67	0.30	215.21	754.64	-0.97	0.98	-5.43	0.20	MWD	LEAM DRILLING SYSTEMS
3/17/2015	849.18	0.27	218.93	849.15	-0.60	0.60	-5.72	0.04	MWD	LEAM DRILLING SYSTEMS
3/17/2015	943.69	0.30	233.64	943.66	-0.27	0.28	-6.06	0.08	MWD	LEAM DRILLING SYSTEMS
3/17/2015	1,038.20	0.31	235.05	1,038.17	0.02	-0.01	-6.46	0.01	MWD	LEAM DRILLING SYSTEMS
3/17/2015	1,132.71	0.31	228.45	1,132.68	0.34	-0.33	-6.86	0.05	MWD	LEAM DRILLING SYSTEMS
3/17/2015	1,227.22	0.32	221.69	1,227.19	0.72	-0.71	-7.22	0.03	MWD	LEAM DRILLING SYSTEMS
3/17/2015	1,321.73	0.29	215.17	1,321.70	1.11	-1.10	-7.53	0.05	MWD	LEAM DRILLING SYSTEMS
3/17/2015	1,416.24	0.24	218.86	1,416.21	1.46	-1.45	-7.80	0.06	MWD	LEAM DRILLING SYSTEMS
3/17/2015	1,510.75	0.26	208.77	1,510.71	1.80	-1.79	-8.02	0.05	MWD	LEAM DRILLING SYSTEMS
3/17/2015	1,605.26	0.24	206.12	1,605.22	2.17	-2.16	-8.21	0.02	MWD	LEAM DRILLING SYSTEMS
3/17/2015	1,699.77	0.19	198.25	1,699.73	2.49	-2.48	-8.35	0.06	MWD	LEAM DRILLING SYSTEMS
3/17/2015	1,794.28	0.16	203.01	1,794.24	2.76	-2.75	-8.45	0.04	MWD	LEAM DRILLING SYSTEMS
3/17/2015	1,888.79	0.18	90.96	1,888.75	2.89	-2.88	-8.35	0.30	MWD	LEAM DRILLING SYSTEMS
3/17/2015	1,983.30	0.34	69.38	1,983.26	2.79	-2.78	-7.94	0.20	MWD	LEAM DRILLING SYSTEMS
3/17/2015	2,077.81	0.45	93.20	2,077.77	2.71	-2.70	-7.31	0.21	MWD	LEAM DRILLING SYSTEMS
3/17/2015	2,172.32	0.50	95.07	2,172.28	2.77	-2.76	-6.53	0.06	MWD	LEAM DRILLING SYSTEMS
3/17/2015	2,266.83	0.51	93.36	2,266.78	2.83	-2.82	-5.70	0.02	MWD	LEAM DRILLING SYSTEMS
3/17/2015	2,361.34	0.50	95.67	2,361.29	2.89	-2.89	-4.87	0.02	MWD	LEAM DRILLING SYSTEMS
3/17/2015	2,455.85	0.49	86.37	2,455.79	2.91	-2.90	-4.05	0.09	MWD	LEAM DRILLING SYSTEMS
3/17/2015	2,550.36	0.42	89.90	2,550.30	2.88	-2.88	-3.30	0.08	MWD	LEAM DRILLING SYSTEMS
3/17/2015	2,644.87	0.35	88.65	2,644.81	2.87	-2.87	-2.67	0.07	MWD	LEAM DRILLING SYSTEMS
3/17/2015	2,739.38	0.34	105.51	2,739.32	2.94	-2.94	-2.11	0.11	MWD	LEAM DRILLING SYSTEMS
3/17/2015	2,833.89	0.23	94.38	2,833.83	3.03	-3.03	-1.65	0.13	MWD	LEAM DRILLING SYSTEMS
3/17/2015	2,928.40	0.24	94.43	2,928.34	3.06	-3.06	-1.28	0.01	MWD	LEAM DRILLING SYSTEMS
3/17/2015	3,022.91	0.28	120.55	3,022.85	3.19	-3.19	-0.87	0.13	MWD	LEAM DRILLING SYSTEMS
3/17/2015	3,117.42	0.33	138.58	3,117.35	3.51	-3.51	-0.49	0.11	MWD	LEAM DRILLING SYSTEMS
3/17/2015	3,211.93	0.43	107.65	3,211.86	3.82	-3.82	0.03	0.24	MWD	LEAM DRILLING SYSTEMS
3/17/2015	3,306.44	0.77	89.89	3,306.37	3.93	-3.93	1.00	0.41	MWD	LEAM DRILLING SYSTEMS
3/17/2015	3,400.95	0.93	74.17	3,400.87	3.71	-3.72	2.37	0.30	MWD	LEAM DRILLING SYSTEMS
3/17/2015	3,495.46	0.86	72.77	3,495.36	3.29	-3.30	3.79	0.08	MWD	LEAM DRILLING SYSTEMS
3/17/2015	3,589.97	0.90	71.43	3,589.88	2.85	-2.85	5.17	0.05	MWD	LEAM DRILLING SYSTEMS
3/17/2015	3,684.48	1.20	87.96	3,684.36	2.57	-2.58	6.86	0.45	MWD	LEAM DRILLING SYSTEMS
3/17/2015	3,778.99	1.74	99.76	3,778.84	2.78	-2.79	9.27	0.65	MWD	LEAM DRILLING SYSTEMS
3/17/2015	3,873.50	1.63	105.57	3,873.31	3.38	-3.39	11.98	0.21	MWD	LEAM DRILLING SYSTEMS
3/17/2015	3,968.01	2.01	110.96	3,967.77	4.33	-4.35	14.82	0.44	MWD	LEAM DRILLING SYSTEMS
3/17/2015	4,062.52	2.41	118.24	4,062.21	5.66	-5.68	18.12	0.52	MWD	LEAM DRILLING SYSTEMS
3/17/2015	4,157.03	2.72	121.66	4,156.62	7.97	-8.00	21.78	0.37	MWD	LEAM DRILLING SYSTEMS
3/17/2015	4,251.54	2.45	119.88	4,251.04	10.14	-10.17	25.44	0.30	MWD	LEAM DRILLING SYSTEMS
3/17/2015	4,272.00	2.39	119.64	4,271.48	10.57	-10.60	26.19	0.29	MWD	LEAM DRILLING SYSTEMS
3/12/2015	4,440.00	2.60	123.10	4,439.32	14.38	-14.41	32.43	0.15	MWD	LEAM DRILLING SYSTEMS
3/12/2015	4,534.00	1.70	112.20	4,533.25	16.06	-16.10	35.50	1.05	MWD	LEAM DRILLING SYSTEMS
3/12/2015	4,629.00	0.60	135.80	4,628.23	16.95	-16.99	37.16	1.24	MWD	LEAM DRILLING SYSTEMS
3/12/2015	4,724.00	0.60	122.90	4,723.23	17.57	-17.62	37.92	0.14	MWD	LEAM DRILLING SYSTEMS
3/12/2015	4,818.00	0.70	116.70	4,817.22	18.10	-18.14	38.85	0.13	MWD	LEAM DRILLING SYSTEMS
3/12/2015	4,913.00	0.80	107.80	4,912.21	18.56	-18.61	40.00	0.16	MWD	LEAM DRILLING SYSTEMS
3/12/2015	5,008.00	0.70	106.90	5,007.20	18.93	-18.98	41.19	0.11	MWD	LEAM DRILLING SYSTEMS
3/12/2015	5,102.00	0.90	108.70	5,101.20	19.33	-19.38	42.43	0.21	MWD	LEAM DRILLING SYSTEMS
3/12/2015	5,196.00	0.40	104.10	5,195.19	19.65	-19.70	43.45	0.53	MWD	LEAM DRILLING SYSTEMS
3/12/2015	5,291.00	0.30	61.90	5,290.18	19.61	-19.66	43.99	0.28	MWD	LEAM DRILLING SYSTEMS
3/12/2015	5,386.00	0.20	354.90	5,385.19	19.33	-19.38	44.20	0.30	MWD	LEAM DRILLING SYSTEMS
3/12/2015	5,480.00	0.30	347.70	5,479.19	18.92	-18.98	44.13	0.11	MWD	LEAM DRILLING SYSTEMS
3/12/2015	5,575.00	0.40	354.80	5,574.18	18.35	-18.40	44.05	0.11	MWD	LEAM DRILLING SYSTEMS
3/12/2015	5,669.00	0.40	339.10	5,668.18	17.72	-17.77	43.90	0.12	MWD	LEAM DRILLING SYSTEMS
3/12/2015	5,859.00	0.40	324.90	5,858.18	16.56	-16.61	43.28	0.05	MWD	LEAM DRILLING SYSTEMS
3/12/2015	5,953.00	0.60	330.50	5,952.17	15.86	-15.91	42.85	0.22	MWD	LEAM DRILLING SYSTEMS
3/12/2015	6,047.00	0.70	339.80	6,046.17	14.88	-14.94	42.41	0.15	MWD	LEAM DRILLING SYSTEMS
3/12/2015	6,142.00	0.90	341.00	6,141.16	13.64	-13.69	41.97	0.21	MWD	LEAM DRILLING SYSTEMS
3/12/2015	6,237.00	0.40	299.60	6,236.15	12.78	-12.82	41.44	0.69	MWD	LEAM DRILLING SYSTEMS

Well Name: COTTON DRAW UNIT 227H

Sub-Division		Region	Field Name		County	State/Province				
DELAWARE BASIN WEST		BASIN WEST	PADUCA		EDDY	NM				
Surface Log Location		APRUM	Latitude (°)	Longitude (°)	Orig KB Elevation (ft)	Ground Elev MSL (ft)	KB - GL (ft)			
SEC 11 25S R31E		3001542932	32° 9' 5.593" N	103° 44' 32.049" W	3,479.40	3,454.40	25.00			
Survey Data										
Date	MD (ft)	Ind (°)	Azm (°)	1VD (ft)	VS (ft)	NS (ft)	EW (ft)	DLS (ft)	Survey Tool	Survey Company
3/12/2015	6,331.00	0.40	283.60	6,330.16	12.64	-12.59	40.83	0.12	MWD	LEAM DRILLING SYSTEMS
3/12/2015	6,426.00	0.30	265.50	6,425.15	12.48	-12.53	40.26	0.18	MWD	LEAM DRILLING SYSTEMS
3/12/2015	6,521.00	0.20	233.80	6,520.16	12.80	-12.64	39.88	0.18	MWD	LEAM DRILLING SYSTEMS
3/12/2015	6,710.00	0.20	244.20	6,708.15	12.94	-12.88	39.32	0.02	MWD	LEAM DRILLING SYSTEMS
3/12/2015	6,804.00	0.20	291.10	6,803.15	12.95	-12.99	39.02	0.17	MWD	LEAM DRILLING SYSTEMS
3/12/2015	6,898.00	0.20	248.10	6,897.15	12.95	-13.00	38.71	0.18	MWD	LEAM DRILLING SYSTEMS
3/12/2015	6,993.00	0.30	264.20	6,992.14	13.04	-13.08	38.31	0.13	MWD	LEAM DRILLING SYSTEMS
3/12/2015	7,087.00	0.10	244.00	7,086.14	13.10	-13.14	37.99	0.22	MWD	LEAM DRILLING SYSTEMS
3/12/2015	7,182.00	0.00	59.40	7,181.14	13.14	-13.18	37.92	0.11	MWD	LEAM DRILLING SYSTEMS
3/12/2015	7,276.00	0.10	54.50	7,275.14	13.09	-13.13	37.88	0.11	MWD	LEAM DRILLING SYSTEMS
3/12/2015	7,371.00	0.20	98.10	7,370.14	13.06	-13.11	38.22	0.15	MWD	LEAM DRILLING SYSTEMS
3/12/2015	7,465.00	0.30	87.20	7,464.14	13.07	-13.12	38.82	0.12	MWD	LEAM DRILLING SYSTEMS
3/12/2015	7,559.00	0.40	111.10	7,558.14	13.18	-13.23	39.18	0.19	MWD	LEAM DRILLING SYSTEMS
3/12/2015	7,654.00	0.50	102.70	7,653.14	13.39	-13.44	39.89	0.13	MWD	LEAM DRILLING SYSTEMS
3/12/2015	7,748.00	0.60	110.20	7,747.13	13.82	-13.67	40.87	0.07	MWD	LEAM DRILLING SYSTEMS
3/17/2015	7,843.00	0.60	130.10	7,842.13	14.08	-14.13	41.44	0.23	MWD	LEAM DRILLING SYSTEMS
3/17/2015	7,937.00	0.60	113.80	7,936.12	14.60	-14.65	42.27	0.18	MWD	LEAM DRILLING SYSTEMS
3/17/2015	8,032.00	0.50	117.10	8,031.12	14.99	-15.04	43.09	0.11	MWD	LEAM DRILLING SYSTEMS
3/17/2015	8,127.00	0.50	124.70	8,126.12	15.41	-15.46	43.80	0.07	MWD	LEAM DRILLING SYSTEMS
3/17/2015	8,221.00	0.50	146.10	8,220.11	15.98	-16.04	44.37	0.20	MWD	LEAM DRILLING SYSTEMS
3/17/2015	8,316.00	0.50	215.50	8,315.11	16.66	-16.72	44.36	0.60	MWD	LEAM DRILLING SYSTEMS
3/17/2015	8,410.00	0.70	223.80	8,409.11	17.41	-17.47	43.73	0.23	MWD	LEAM DRILLING SYSTEMS
3/17/2015	8,504.00	0.90	210.30	8,503.10	18.47	-18.52	42.96	0.29	MWD	LEAM DRILLING SYSTEMS
3/17/2015	8,599.00	0.40	234.50	8,598.09	19.30	-19.35	42.31	0.59	MWD	LEAM DRILLING SYSTEMS
3/17/2015	8,693.00	0.40	221.90	8,692.09	19.74	-19.79	41.82	0.09	MWD	LEAM DRILLING SYSTEMS
3/17/2015	8,788.00	0.50	172.10	8,787.09	20.40	-20.45	41.66	0.41	MWD	LEAM DRILLING SYSTEMS
3/17/2015	8,882.00	1.00	115.20	8,881.08	21.15	-21.20	42.46	0.89	MWD	LEAM DRILLING SYSTEMS
3/17/2015	8,977.00	0.90	113.80	8,976.08	21.80	-21.86	43.89	0.11	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,072.00	0.80	106.90	9,071.05	22.30	-22.35	45.21	0.15	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,166.00	0.80	109.20	9,165.05	22.70	-22.76	46.45	0.03	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,261.00	1.20	110.20	9,260.03	23.26	-23.32	46.01	0.42	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,355.00	0.60	118.90	9,354.02	23.84	-23.90	46.37	0.65	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,450.00	0.70	107.60	9,449.01	24.25	-24.31	50.36	0.17	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,545.00	0.70	89.10	9,544.01	24.42	-24.48	51.49	0.24	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,639.00	0.80	57.70	9,638.00	24.06	-24.12	52.62	0.44	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,733.00	0.50	21.50	9,731.99	23.32	-23.39	53.32	0.53	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,825.00	3.50	160.30	9,823.94	25.59	-25.66	54.42	4.23	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,856.00	9.10	164.60	9,854.74	28.85	-28.91	55.39	18.12	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,888.00	14.50	164.70	9,886.05	35.15	-35.22	57.12	16.88	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,919.00	18.00	166.50	9,915.81	43.56	-43.63	59.26	11.41	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,951.00	20.00	168.30	9,946.07	53.72	-53.79	61.53	6.51	MWD	LEAM DRILLING SYSTEMS
3/17/2015	9,983.00	22.10	170.00	9,975.93	65.01	-65.08	63.68	6.83	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,014.00	24.70	173.00	10,004.38	77.18	-77.26	65.48	9.22	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,046.00	27.40	176.30	10,033.13	91.16	-91.24	66.78	9.57	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,077.00	29.80	179.30	10,060.34	105.99	-106.07	67.33	9.02	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,109.00	31.50	180.00	10,087.87	122.30	-122.38	67.43	5.43	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,140.00	32.60	178.40	10,114.15	138.75	-138.83	67.66	4.48	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,172.00	35.10	178.60	10,140.72	156.56	-156.64	68.13	7.82	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,203.00	38.40	170.70	10,165.56	175.10	-175.19	68.39	10.85	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,235.00	41.20	181.10	10,190.14	195.58	-195.67	68.24	9.19	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,266.00	44.60	181.80	10,212.84	216.68	-216.76	67.71	11.07	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,298.00	47.60	182.70	10,235.03	239.72	-239.79	66.80	9.59	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,329.00	50.60	183.50	10,255.33	263.11	-263.19	65.53	9.87	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,361.00	53.60	183.90	10,274.98	288.31	-288.38	63.89	9.43	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,392.00	57.10	181.80	10,292.80	313.77	-313.85	62.64	12.58	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,424.00	60.00	180.60	10,309.30	341.06	-341.14	62.07	9.61	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,455.00	63.00	180.00	10,324.09	368.30	-368.38	61.93	9.83	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,487.00	65.10	179.30	10,338.09	397.07	-397.15	62.11	6.85	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,518.00	68.10	178.80	10,350.40	425.52	-425.58	62.58	9.78	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,550.00	71.90	180.40	10,361.35	455.58	-455.65	62.78	12.77	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,581.00	74.70	181.60	10,370.25	485.26	-485.34	62.28	9.76	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,612.00	76.50	182.50	10,377.96	515.27	-515.34	61.19	6.45	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,643.00	78.70	182.30	10,384.62	545.52	-545.59	59.92	7.12	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,675.00	81.80	181.60	10,390.04	577.04	-577.11	58.85	9.92	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,715.00	84.90	180.60	10,394.67	616.76	-616.83	58.09	8.14	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,796.00	87.00	181.80	10,400.39	697.53	-697.60	56.39	2.98	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,891.00	88.50	182.80	10,404.12	792.38	-792.45	52.58	1.90	MWD	LEAM DRILLING SYSTEMS
3/17/2015	10,985.00	88.20	183.40	10,406.83	886.21	-886.27	47.50	0.71	MWD	LEAM DRILLING SYSTEMS
3/17/2015	11,080.00	88.30	182.00	10,409.73	981.07	-981.12	43.03	1.48	MWD	LEAM DRILLING SYSTEMS
3/17/2015	11,174.00	89.00	180.90	10,411.94	1,075.01	-1,075.08	40.65	1.39	MWD	LEAM DRILLING SYSTEMS
3/17/2015	11,268.00	89.20	180.60	10,413.42	1,168.99	-1,169.04	39.42	0.38	MWD	LEAM DRILLING SYSTEMS
3/17/2015	11,363.00	90.50	179.50	10,413.87	1,263.99	-1,264.04	39.34	1.79	MWD	LEAM DRILLING SYSTEMS
3/17/2015	11,458.00	90.30	181.60	10,413.00	1,358.98	-1,359.02	38.43	2.22	MWD	LEAM DRILLING SYSTEMS
3/17/2015	11,552.00	90.00	180.90	10,412.76	1,452.96	-1,453.00	38.38	0.81	MWD	LEAM DRILLING SYSTEMS
3/17/2015	11,647.00	89.10	180.70	10,413.50	1,547.94	-1,547.99	35.05	0.97	MWD	LEAM DRILLING SYSTEMS
3/17/2015	11,741.00	89.50	181.60	10,414.65	1,641.92	-1,641.96	33.16	1.05	MWD	LEAM DRILLING SYSTEMS
3/17/2015	11,836.00	88.90	181.40	10,415.98	1,736.88	-1,736.92	30.88	0.87	MWD	LEAM DRILLING SYSTEMS

Page 2/3

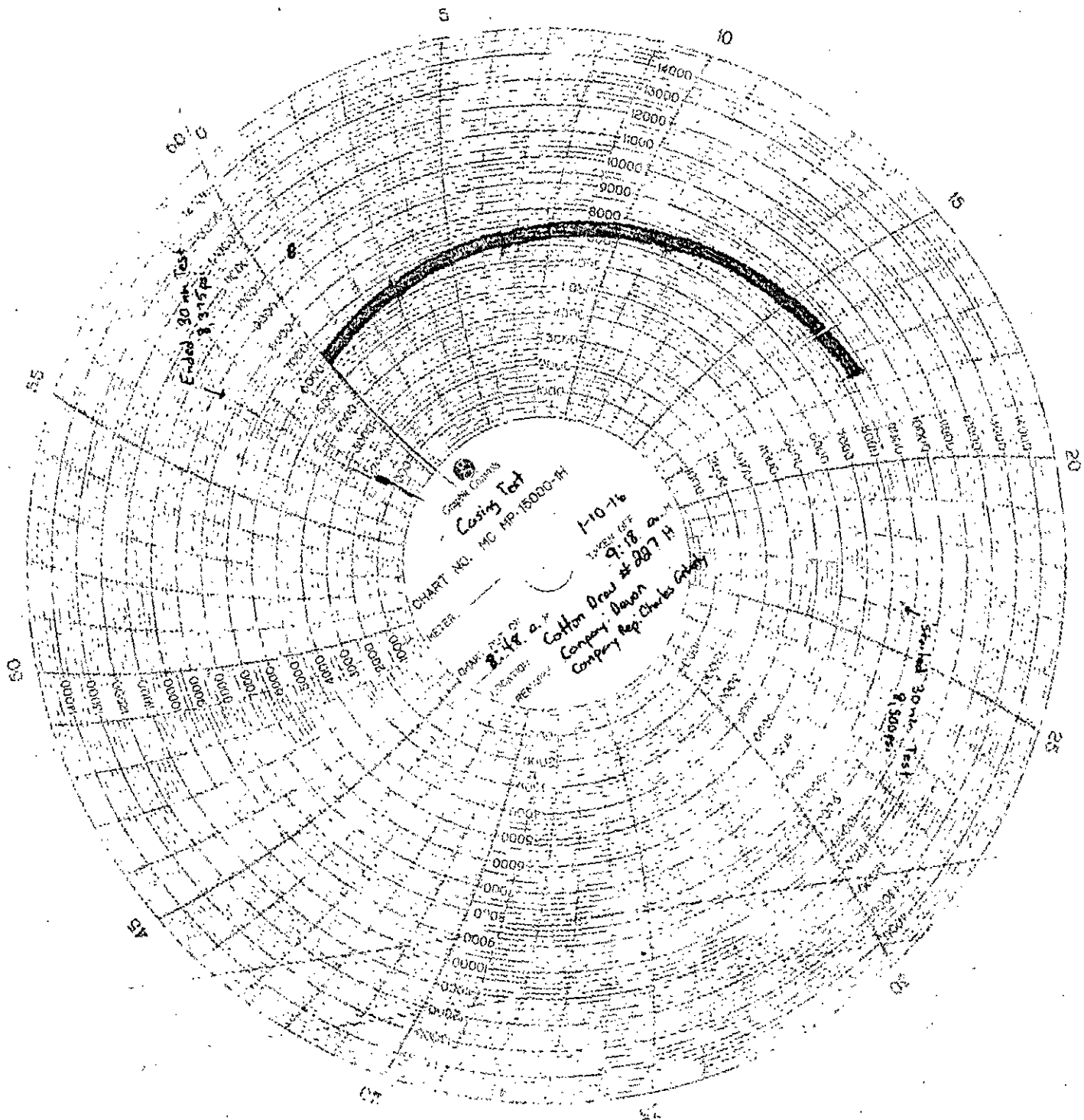
Report Printed: 4/14/2016



Well Name: COTTON DRAW UNIT 227H

Sub-Division DELAWARE BASIN WEST	Region BASIN WEST	Field Name PADUCA	County EDDY	State/Province NM
Surface Leg 1 location SEC 11 25S R31E	APN/UM 3001542932	Latitude (°) 32° 9' 5.593" N	Longitude (°) 103° 44' 32.049" W	Orig. KB Elevation (ft) 3,470.40
				Ground Elev. USL (ft) 3,454.40
				KB - CL (ft) 25.00

Survey Data										
Date	MO (RKB)	Incl (°)	Azim (°)	TVD (RKB)	VS (°)	N/S (ft)	EW (ft)	DLS (°/100ft)	Survey Tool	Survey Company
3/17/2015	11,930.00	88.30	182.10	10,418.28	1,830.81	-1,830.84	27.81	0.98	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,025.00	90.00	182.30	10,418.68	1,925.73	-1,925.76	24.16	1.80	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,119.00	90.30	182.10	10,419.44	2,019.68	-2,019.69	20.55	0.38	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,213.00	88.50	182.00	10,420.42	2,113.80	-2,113.82	17.19	1.92	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,308.00	89.10	181.60	10,422.41	2,208.53	-2,208.55	14.21	0.76	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,308.00	89.10	181.60	10,422.41	2,208.53	-2,208.55	14.21	0.76	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,403.00	89.00	181.10	10,423.99	2,303.50	-2,303.51	11.97	0.54	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,497.00	89.80	179.70	10,424.97	2,397.49	-2,397.50	11.31	1.72	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,591.00	89.90	179.30	10,425.22	2,491.48	-2,491.50	12.13	0.44	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,686.00	90.00	179.00	10,425.30	2,586.47	-2,586.49	13.54	0.33	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,780.00	90.30	178.80	10,425.05	2,680.45	-2,680.47	15.35	0.38	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,875.00	89.90	179.50	10,424.89	2,775.44	-2,775.46	16.78	0.85	MWD	LEAM DRILLING SYSTEMS
3/17/2015	12,969.00	89.60	178.60	10,425.30	2,869.42	-2,869.44	18.32	1.01	MWD	LEAM DRILLING SYSTEMS
3/17/2015	13,064.00	91.30	180.40	10,424.55	2,964.41	-2,964.43	19.14	2.61	MWD	LEAM DRILLING SYSTEMS
3/17/2015	13,159.00	90.40	181.30	10,423.14	3,059.38	-3,059.41	17.74	1.34	MWD	LEAM DRILLING SYSTEMS
3/17/2015	13,253.00	90.00	181.60	10,422.82	3,153.36	-3,153.38	15.38	0.53	MWD	LEAM DRILLING SYSTEMS
3/17/2015	13,348.00	89.20	182.30	10,423.48	3,248.30	-3,248.32	12.12	1.12	MWD	LEAM DRILLING SYSTEMS
3/17/2015	13,443.00	88.50	183.50	10,425.39	3,343.18	-3,343.17	7.32	1.46	MWD	LEAM DRILLING SYSTEMS
3/17/2015	13,537.00	87.80	182.50	10,428.42	3,438.99	-3,438.99	2.40	1.30	MWD	LEAM DRILLING SYSTEMS
3/17/2015	13,631.00	87.00	181.60	10,432.68	3,530.83	-3,530.84	-0.98	1.28	MWD	LEAM DRILLING SYSTEMS
3/17/2015	13,726.00	86.90	182.10	10,437.74	3,625.65	-3,625.65	-4.02	0.54	MWD	LEAM DRILLING SYSTEMS
3/17/2015	13,820.00	87.00	180.80	10,442.74	3,719.49	-3,719.49	-8.23	1.60	MWD	LEAM DRILLING SYSTEMS
3/17/2015	13,914.00	87.40	179.90	10,447.33	3,813.38	-3,813.38	-6.64	0.86	MWD	LEAM DRILLING SYSTEMS
3/17/2015	14,008.00	88.20	178.10	10,450.94	3,907.29	-3,907.29	-5.00	2.09	MWD	LEAM DRILLING SYSTEMS
3/17/2015	14,102.00	88.80	177.00	10,453.40	4,001.17	-4,001.17	-0.98	1.33	MWD	LEAM DRILLING SYSTEMS
3/17/2015	14,196.00	88.30	177.00	10,455.78	4,095.00	-4,095.01	3.93	0.53	MWD	LEAM DRILLING SYSTEMS
3/17/2015	14,290.00	87.00	177.60	10,459.63	4,188.81	-4,188.82	8.36	1.52	MWD	LEAM DRILLING SYSTEMS
3/17/2015	14,384.00	88.50	181.10	10,463.33	4,282.71	-4,282.73	9.42	4.06	MWD	LEAM DRILLING SYSTEMS
3/17/2015	14,478.00	88.30	183.50	10,465.95	4,376.60	-4,376.61	5.65	2.56	MWD	LEAM DRILLING SYSTEMS
3/17/2015	14,571.00	87.70	181.30	10,469.20	4,469.46	-4,469.46	1.76	2.45	MWD	LEAM DRILLING SYSTEMS
3/17/2015	14,665.00	86.60	181.30	10,473.87	4,563.32	-4,563.32	-0.37	1.17	MWD	LEAM DRILLING SYSTEMS
3/17/2015	14,759.00	85.10	181.60	10,480.67	4,657.04	-4,657.04	-2.74	1.63	MWD	LEAM DRILLING SYSTEMS
3/17/2015	14,863.00	85.10	181.60	10,489.56	4,760.63	-4,760.62	-5.64	0.00	BIT	LEAM DRILLING SYSTEMS



Graphic Controls
Casing Test

CHART NO. MC HP-15000-14
METER

DRAWN BY
2-14-16
Cotton Deal #287 H
Company Reg. Charles Gentry

1-10-16
WELL OFF
9:18 a.m.

Ended 30 min. Test
8:55 p.m.

Ended 30 min. Test
8:50 p.m.

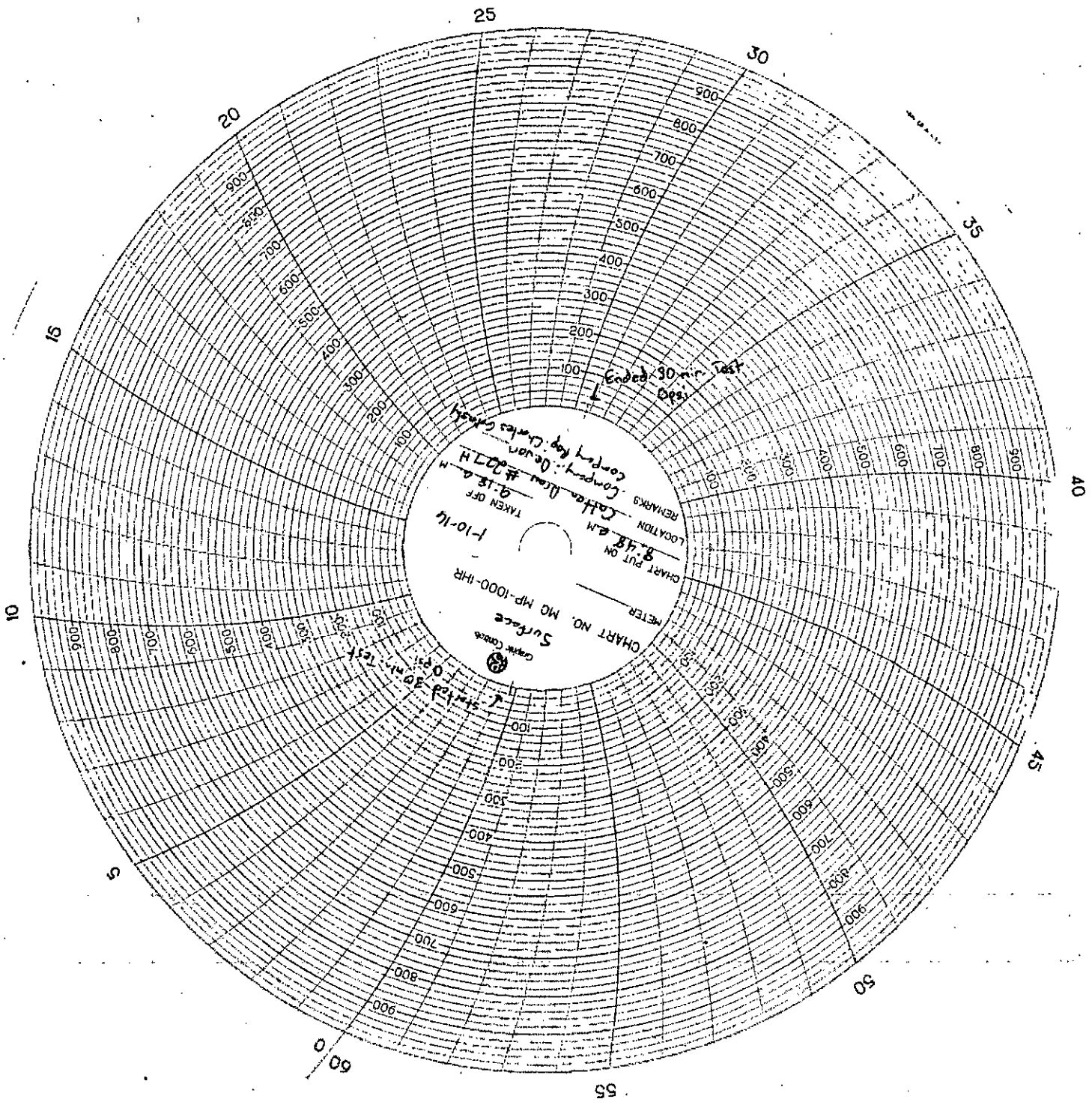


CHART NO. 100-1000-IHR
Surface
T-10-14
8.48 AM
LOCATION: Cotton, Alton #27H
TAKEN OFF: 9-18-0
Company: Alton #27H
Company: Charles C. Jones
Remarks: 30 min test
Obs: 1

55

60 0

50

5

10

15

20

25

30

35

40

45

Graphic Controls

Intermediate

CHART NO. MC MP-1000-1HR

METER

CHART PUT ON 8:48 a.m.

LOCATION

REMARKS

116-18

TAKEN OFF 9:18 a.m.

Cotton Oras #22.7.H

Company: Devon

Company Rep: Charles G. Smith

Started 80-psi Test

Test 80-psi