



Ursa Operating Company, LLC

Rockies Region

Yater

YATER 12A-17-07-95

Wellbore #1

Design: Actual

End of Well Report

15 July, 2015



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well YATER 12A-17-07-95
Project:	Rockies Region	TVD Reference:	YATER 12A-17-07-95 @ 5536.0usft (CAPSTAR 321)
Site:	Yater	MD Reference:	YATER 12A-17-07-95 @ 5536.0usft (CAPSTAR 321)
Well:	YATER 12A-17-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

Project	Rockies Region		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	Yater		
Site Position:		Northing:	1,593,358.14 usft
From:	Lat/Long	Easting:	2,286,525.77 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	39° 26' 7.071 N
		Longitude:	108° 1' 35.041 W
		Grid Convergence:	-1.59 °

Well		YATER 12A-17-07-95, SHL LAT: 39.435160341 LONG: -108.026396104				
Well Position	+N-S	0.0 usft	Northing:	1,593,308.13 usft	Latitude:	39° 26' 6.577 N
	+E-W	0.0 usft	Easting:	2,286,525.54 usft	Longitude:	108° 1' 35.026 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,536.0 usft	Ground Level:	5,519.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/15/2015	9.84	65.57	51,813

Design	Actual			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	347.67

Survey Program	Date	7/15/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
268.0	7,297.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
268.0	1.05	282.74	268.0	1.0	0.5	-2.4	0.39	0.39	0.00	
298.0	1.05	286.30	298.0	1.3	0.7	-2.9	0.22	0.00	11.87	
328.0	1.63	324.66	328.0	1.8	1.1	-3.4	3.46	1.93	127.87	
359.0	2.55	326.29	359.0	2.9	2.0	-4.1	2.97	2.97	5.26	
390.0	3.52	330.29	389.9	4.4	3.4	-4.9	3.20	3.13	12.90	
421.0	4.66	335.78	420.8	6.6	5.4	-5.9	3.88	3.68	17.71	
451.0	5.11	335.81	450.7	9.1	7.7	-7.0	1.50	1.50	0.10	
481.0	5.58	339.30	480.6	11.8	10.3	-8.0	1.90	1.57	11.63	
512.0	6.06	338.24	511.4	14.9	13.3	-9.2	1.59	1.55	-3.42	
543.0	5.98	339.83	542.3	18.1	16.3	-10.3	0.60	-0.26	5.13	
573.0	6.37	345.76	572.1	21.3	19.4	-11.3	2.49	1.30	19.77	
604.0	6.37	347.12	602.9	24.8	22.7	-12.1	0.49	0.00	4.39	
635.0	6.77	344.79	633.7	28.3	26.2	-12.9	1.55	1.29	-7.52	
665.0	6.86	343.03	663.5	31.9	29.6	-13.9	0.76	0.30	-5.87	
696.0	6.94	344.57	694.3	35.6	33.2	-15.0	0.65	0.26	4.97	
727.0	7.34	342.99	725.0	39.4	36.8	-16.1	1.44	1.29	-5.10	
757.0	8.09	342.99	754.7	43.4	40.7	-17.2	2.50	2.50	0.00	
800.0	9.18	342.86	797.3	49.9	46.9	-19.1	2.54	2.53	-0.30	
843.0	10.24	342.11	839.6	57.1	53.8	-21.3	2.48	2.47	-1.74	
885.0	11.60	340.09	880.9	65.0	61.3	-23.9	3.36	3.24	-4.81	
928.0	12.70	338.42	922.9	73.9	69.8	-27.1	2.69	2.56	-3.88	
971.0	13.86	338.13	964.8	83.7	78.9	-30.8	2.70	2.70	-0.67	
1,014.0	15.19	339.10	1,006.4	94.3	89.0	-34.7	3.14	3.09	2.26	
1,056.0	16.49	341.88	1,046.8	105.7	99.8	-38.5	3.58	3.10	6.62	
1,099.0	17.84	343.65	1,087.9	118.4	111.9	-42.3	3.37	3.14	4.12	
1,142.0	19.38	345.48	1,128.6	132.1	125.1	-45.9	3.83	3.58	4.26	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
1,184.0	20.83	346.77	1,168.1	146.5	139.2	-49.4	3.61	3.45	3.07	
1,227.0	22.32	348.22	1,208.1	162.3	154.6	-52.8	3.68	3.47	3.37	
1,270.0	23.82	348.61	1,247.6	179.1	171.1	-56.2	3.51	3.49	0.91	
1,312.0	25.18	348.39	1,285.8	196.6	188.2	-59.6	3.25	3.24	-0.52	
1,355.0	26.46	349.77	1,324.5	215.3	206.6	-63.2	3.29	2.98	3.21	
1,398.0	28.39	349.10	1,362.7	235.1	226.0	-66.8	4.55	4.49	-1.56	
1,440.0	29.90	348.82	1,399.4	255.5	246.1	-70.7	3.61	3.60	-0.67	
1,483.0	31.42	348.17	1,436.4	277.5	267.6	-75.1	3.62	3.53	-1.51	
1,526.0	33.05	346.81	1,472.7	300.4	290.0	-80.1	4.15	3.79	-3.16	
1,569.0	34.45	347.21	1,508.5	324.3	313.3	-85.4	3.30	3.26	0.93	
1,611.0	35.77	347.78	1,542.9	348.4	336.8	-90.7	3.24	3.14	1.36	
1,654.0	37.14	348.50	1,577.4	374.0	361.8	-95.9	3.34	3.19	1.67	
1,697.0	38.85	347.47	1,611.3	400.4	387.7	-101.4	4.24	3.98	-2.40	
1,739.0	39.86	347.38	1,643.8	427.1	413.7	-107.2	2.41	2.40	-0.21	
1,775.0	40.25	347.69	1,671.4	450.2	436.3	-112.2	1.22	1.08	0.86	
1,846.0	42.01	347.74	1,724.8	496.9	482.0	-122.2	2.48	2.48	0.07	
1,931.0	41.18	348.66	1,788.4	553.4	537.2	-133.7	1.21	-0.98	1.08	
2,016.0	40.52	348.17	1,852.7	609.0	591.7	-144.9	0.86	-0.78	-0.58	
2,102.0	39.51	347.56	1,918.6	664.3	645.7	-156.5	1.26	-1.17	-0.71	
2,187.0	38.58	346.51	1,984.6	717.8	697.9	-168.5	1.34	-1.09	-1.24	
2,273.0	37.27	345.67	2,052.4	770.6	749.2	-181.2	1.64	-1.52	-0.98	
2,358.0	36.97	346.65	2,120.2	821.9	799.0	-193.5	0.78	-0.35	1.15	
2,444.0	37.12	347.35	2,188.8	873.7	849.5	-205.1	0.52	0.17	0.81	
2,529.0	38.54	347.56	2,256.0	925.8	900.4	-216.5	1.68	1.67	0.25	
2,614.0	37.43	346.00	2,323.0	978.1	951.3	-228.4	1.73	-1.31	-1.84	
2,699.0	38.01	348.53	2,390.2	1,030.1	1,002.0	-239.9	1.94	0.68	2.98	
2,785.0	38.85	348.78	2,457.6	1,083.6	1,054.4	-250.4	0.99	0.98	0.29	

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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
2,871.0	40.08	349.10	2,524.0	1,138.2	1,108.1	-260.9	1.45	1.43	0.37	
2,957.0	39.51	348.79	2,590.0	1,193.3	1,162.1	-271.4	0.70	-0.66	-0.36	
3,042.0	38.85	347.69	2,655.9	1,247.0	1,214.7	-282.4	1.13	-0.78	-1.29	
3,128.0	38.84	347.45	2,722.9	1,300.9	1,267.4	-294.0	0.18	-0.01	-0.28	
3,214.0	39.86	349.67	2,789.4	1,355.4	1,320.8	-304.8	2.02	1.19	2.58	
3,299.0	39.07	348.92	2,855.0	1,409.4	1,373.9	-314.8	1.09	-0.93	-0.88	
3,384.0	38.58	348.39	2,921.3	1,462.7	1,426.1	-325.3	0.70	-0.58	-0.62	
3,470.0	38.10	347.96	2,988.7	1,516.0	1,478.3	-336.2	0.64	-0.56	-0.50	
3,555.0	37.44	347.34	3,055.9	1,568.1	1,529.2	-347.3	0.90	-0.78	-0.73	
3,641.0	38.19	348.70	3,123.8	1,620.8	1,580.8	-358.3	1.30	0.87	1.58	
3,726.0	37.66	348.44	3,190.9	1,673.1	1,632.0	-368.6	0.65	-0.62	-0.31	
3,811.0	36.87	347.38	3,258.5	1,724.5	1,682.3	-379.4	1.20	-0.93	-1.25	
3,896.0	35.77	347.91	3,327.0	1,774.9	1,731.5	-390.2	1.35	-1.29	0.62	
3,982.0	34.45	347.27	3,397.4	1,824.3	1,779.8	-400.8	1.59	-1.53	-0.74	
4,067.0	33.22	346.90	3,468.0	1,871.7	1,825.9	-411.4	1.47	-1.45	-0.44	
4,153.0	32.21	349.19	3,540.3	1,918.1	1,871.4	-421.0	1.86	-1.17	2.66	
4,238.0	30.63	349.84	3,612.9	1,962.4	1,915.0	-429.1	1.90	-1.86	0.76	
4,324.0	28.13	349.01	3,687.8	2,004.6	1,956.4	-436.8	2.95	-2.91	-0.97	
4,409.0	25.14	348.53	3,763.8	2,042.7	1,993.8	-444.2	3.53	-3.52	-0.56	
4,494.0	22.62	348.48	3,841.5	2,077.1	2,027.5	-451.1	2.96	-2.96	-0.06	
4,580.0	19.73	347.78	3,921.7	2,108.1	2,057.9	-457.5	3.37	-3.36	-0.81	
4,665.0	17.36	350.55	4,002.3	2,135.2	2,084.5	-462.6	2.97	-2.79	3.26	
4,751.0	14.81	349.17	4,084.9	2,159.0	2,107.9	-466.8	3.00	-2.97	-1.60	
4,836.0	12.70	348.26	4,167.4	2,179.2	2,127.7	-470.7	2.50	-2.48	-1.07	
4,922.0	10.34	349.97	4,251.7	2,196.3	2,144.6	-474.0	2.77	-2.74	1.99	
5,007.0	8.35	344.79	4,335.6	2,210.1	2,158.1	-476.9	2.54	-2.34	-6.09	
5,092.0	6.42	348.57	4,419.9	2,221.0	2,168.7	-479.5	2.34	-2.27	4.45	

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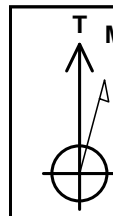
Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
5,177.0	4.04	6.41	4,504.5	2,228.6	2,176.3	-480.1	3.36	-2.80	20.99	
5,263.0	1.76	37.00	4,590.4	2,232.4	2,180.4	-479.0	3.11	-2.65	35.57	
5,348.0	1.19	49.08	4,675.4	2,233.6	2,182.0	-477.5	0.76	-0.67	14.21	
5,434.0	0.75	52.47	4,761.4	2,234.3	2,182.9	-476.4	0.52	-0.51	3.94	
5,519.0	0.47	61.47	4,846.4	2,234.6	2,183.4	-475.6	0.35	-0.33	10.59	
5,605.0	0.40	107.66	4,932.4	2,234.6	2,183.5	-475.0	0.40	-0.08	53.71	
5,690.0	0.44	159.34	5,017.3	2,234.1	2,183.1	-474.6	0.43	0.05	60.80	
5,776.0	0.59	162.86	5,103.3	2,233.3	2,182.4	-474.4	0.18	0.17	4.09	
5,861.0	0.90	174.40	5,188.3	2,232.2	2,181.3	-474.2	0.40	0.36	13.58	
5,946.0	0.97	187.07	5,273.3	2,230.9	2,179.9	-474.2	0.26	0.08	14.91	
6,032.0	1.05	200.96	5,359.3	2,229.6	2,178.5	-474.6	0.30	0.09	16.15	
6,117.0	1.19	210.36	5,444.3	2,228.3	2,177.0	-475.3	0.27	0.16	11.06	
6,203.0	1.05	318.86	5,530.3	2,228.3	2,176.8	-476.3	2.12	-0.16	126.16	
6,288.0	1.14	32.25	5,615.3	2,229.6	2,178.1	-476.4	1.54	0.11	86.34	
6,373.0	1.32	52.16	5,700.3	2,230.6	2,179.4	-475.1	0.54	0.21	23.42	
6,459.0	1.41	60.99	5,786.2	2,231.3	2,180.5	-473.4	0.27	0.10	10.27	
6,544.0	0.83	52.69	5,871.2	2,231.9	2,181.4	-472.0	0.71	-0.68	-9.76	
6,630.0	0.44	320.67	5,957.2	2,232.4	2,182.0	-471.7	1.11	-0.45	-107.00	
6,715.0	1.05	266.57	6,042.2	2,232.9	2,182.2	-472.7	1.02	0.72	-63.65	
6,801.0	1.49	254.75	6,128.2	2,232.9	2,181.9	-474.6	0.59	0.51	-13.74	
6,886.0	1.01	323.57	6,213.2	2,233.5	2,182.2	-476.1	1.73	-0.56	80.96	
6,971.0	1.03	29.16	6,298.2	2,234.8	2,183.5	-476.2	1.30	0.02	77.16	
7,057.0	0.44	351.47	6,384.1	2,235.7	2,184.5	-475.8	0.85	-0.69	-43.83	
7,142.0	0.53	305.68	6,469.1	2,236.3	2,185.0	-476.2	0.45	0.11	-53.87	
7,228.0	0.62	289.90	6,555.1	2,236.9	2,185.4	-477.0	0.21	0.10	-18.35	
7,240.0	0.62	298.82	6,567.1	2,237.0	2,185.5	-477.1	0.80	0.00	74.33	
7,297.0	0.62	298.82	6,624.1	2,237.4	2,185.8	-477.6	0.00	0.00	0.00	

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Design:	Actual	Database:	EDM 5000.1 Single User Db

Checked By: _____
 Approved By: _____
 Date: _____

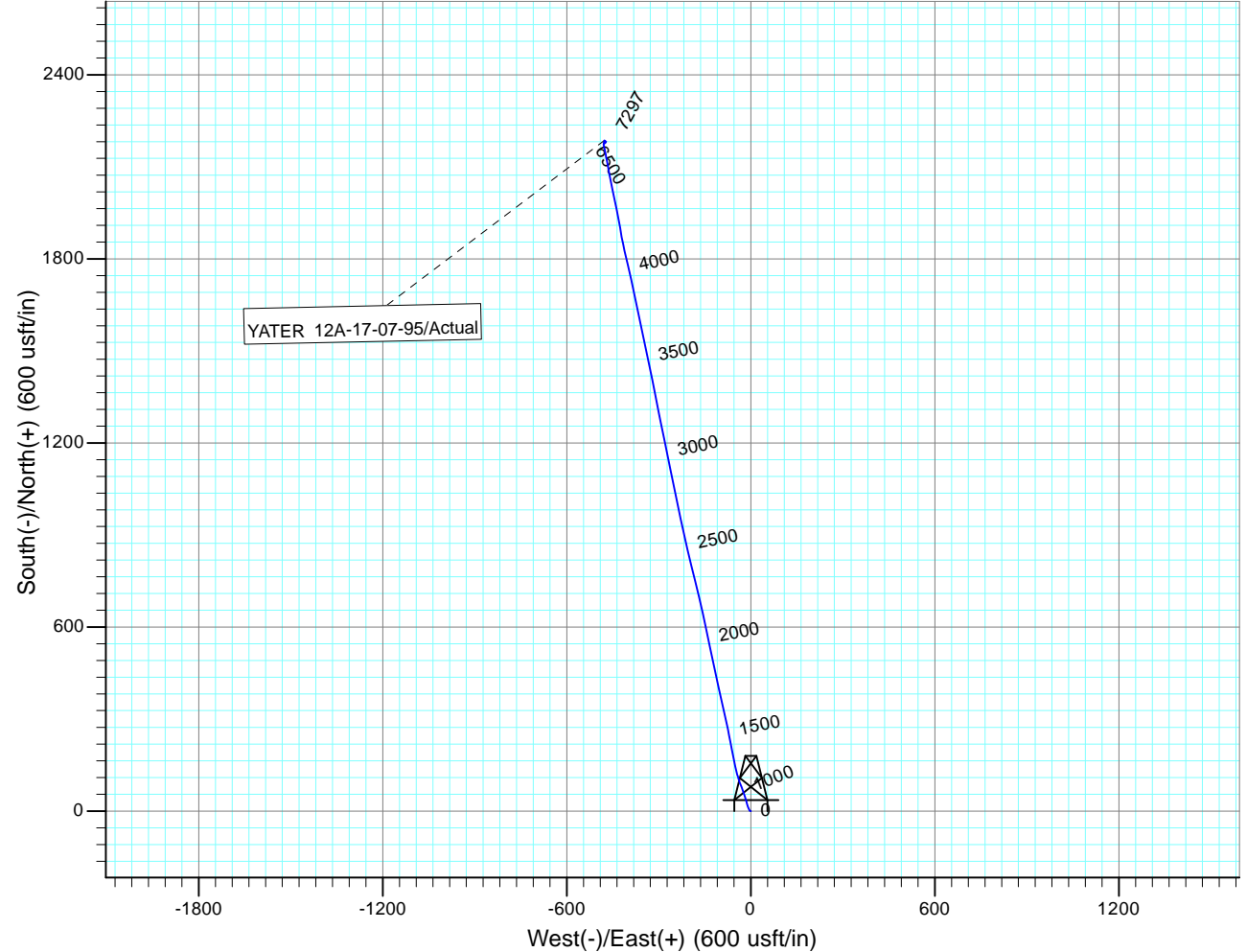
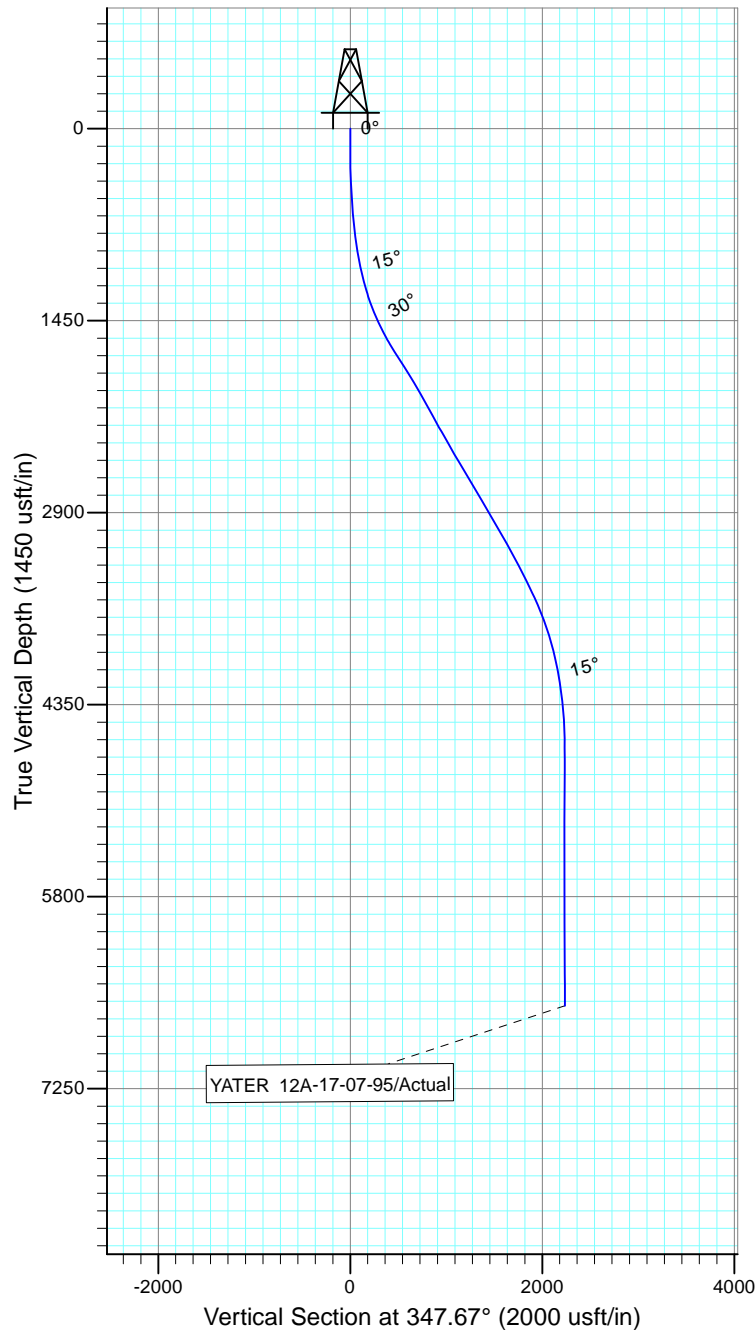


Project: Rockies Region
Site: Yater
Well: YATER 12A-17-07-95
Wellbore: Wellbore #1
Design: Actual



Azimuths to True North
Magnetic North: 9.84°

Magnetic Field
Strength: 51813.5nT
Dip Angle: 65.57°
Date: 6/15/2015
Model: IGRF2010



Design: Actual (YATER 12A-17-07-95/Wellbore #1)

Created By: Matthew Linton Date: 13:55, July 15 2015

THIS SURVEY IS CORRECT TO THE BEST OF
MY KNOWLEDGE AND IS SUPPORTED
BY ACTUAL FIELD DATA