

VERDAD RESOURCES

WATTENBERG FIELD

1N-64W-19 CHIVE & SHALLOT PAD

CHIVE 2536-10H

Plan A

Design #1

Anticollision Summary Report

19 May, 2023

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well CHIVE 2536-10H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 5031.00usft (RIG)
Reference Site:	1N-64W-19 CHIVE & SHALLOT PAD	MD Reference:	RKB = 20' @ 5031.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CHIVE 2536-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan A	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference	Design #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,500.00usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.45 Sigma	Casing Method:	Added to Error Values

Survey Tool Program	Date	5/15/2023			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	2,070.00	Design #1 (Plan A)	ISCWSA MWD	Fixed:v2:standard declination	
2,070.00	20,069.16	Design #1 (Plan A)	ISCWSA MWD	Fixed:v2:standard declination	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
1N-64W-19 CHIVE & SHALLOT PAD						
CHIVE 2536-11H - Plan A - Design #1	200.65	200.65	16.00	8.43	2.114	CC
CHIVE 2536-11H - Plan A - Design #1	2,700.00	2,717.40	41.36	0.67	1.017	Level 2, ES, SF
CHIVE 2536-12H - Plan A - Design #1	200.65	200.65	32.00	24.43	4.228	CC, ES
CHIVE 2536-12H - Plan A - Design #1	20,069.16	19,228.09	1,233.20	676.57	2.215	SF
CHIVE 2536-13H - Plan A - Design #1	200.65	200.65	48.00	40.43	6.342	CC, ES
CHIVE 2536-13H - Plan A - Design #1	2,400.00	2,441.49	121.36	88.41	3.683	SF
CHIVE 2536-14H - Plan A - Design #1	200.65	200.65	64.00	56.43	8.456	CC, ES
CHIVE 2536-14H - Plan A - Design #1	2,200.00	2,247.55	155.95	127.06	5.398	SF
CHIVE 2536-15H - Plan A - Design #1	200.65	200.65	79.99	72.42	10.569	CC, ES
CHIVE 2536-15H - Plan A - Design #1	2,100.00	2,147.87	200.12	172.80	7.326	SF
CHIVE 2536-16H - Plan A - Design #1	200.65	200.65	95.99	88.43	12.683	CC, ES
CHIVE 2536-16H - Plan A - Design #1	2,000.00	2,042.71	248.07	222.84	9.833	SF
CHIVE 2536-17H - Plan A - Design #1	200.65	200.65	112.00	104.43	14.797	CC, ES
CHIVE 2536-17H - Plan A - Design #1	1,900.00	1,931.42	299.19	276.61	13.254	SF
SHALLOT 1930-18H - Plan A - Design #1	200.65	200.65	128.00	120.43	16.911	CC, ES, SF
SHALLOT 1930-19H - Plan A - Design #1	200.65	200.65	144.00	136.43	19.025	CC, ES, SF
SHALLOT 1930-20H - Plan A - Design #1	200.65	200.65	160.00	152.43	21.138	CC, ES
SHALLOT 1930-20H - Plan A - Design #1	300.00	299.98	161.66	154.01	21.126	SF
SHALLOT 1930-21H - Plan A - Design #1	200.65	200.65	176.00	168.43	23.252	CC, ES
SHALLOT 1930-21H - Plan A - Design #1	300.00	299.98	177.66	170.01	23.217	SF
SHALLOT 1930-22H - Plan A - Design #1	200.65	200.65	192.00	184.43	25.366	CC, ES
SHALLOT 1930-22H - Plan A - Design #1	300.00	299.98	193.66	186.01	25.308	SF
SHALLOT 1930-23H - Plan A - Design #1	200.65	200.65	208.00	200.43	27.480	CC, ES
SHALLOT 1930-23H - Plan A - Design #1	300.00	298.41	209.77	202.12	27.416	SF
SHALLOT 1930-24H - Plan A - Design #1	200.65	200.65	224.00	216.43	29.594	CC, ES, SF
1N-64W-19 Offsets						
STEVENS #1 - KPK P/A Well - No Surveys						Out of range
WEIMER #1 - Petro-American Energy D/A Well - No Sur						Out of range

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Reference Site:	1N-64W-19 CHIVE & SHALLOT PAD	MD Reference:	RKB = 20' @ 5031.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CHIVE 2536-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan A	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
1N-64W-19 ONION 1907 PAD						
ONION 1907-01H - VERDAD PR Well - Actual SLB Surv	262.28	266.42	221.42	213.81	29.107	CC, ES
ONION 1907-01H - VERDAD PR Well - Actual SLB Surv	1,300.00	1,295.83	322.08	309.24	25.083	SF
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	229.86			
ONION 1907-02H - VERDAD PR Well - Actual SLB Surv	300.00	300.53	232.00	224.36	30.381	SF
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	238.16			
ONION 1907-03H - VERDAD PR Well - Actual SLB Surv	300.00	300.19	240.16	232.52	31.454	SF
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	247.18			
ONION 1907-04H - VERDAD PR Well - Actual SLB Surv	300.00	299.65	249.50	241.87	32.701	SF
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	256.90			
ONION 1907-05H - VERDAD PR Well - Actual SLB Surv	300.00	300.38	259.08	251.45	33.953	SF
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	267.25			
ONION 1907-06H - VERDAD PR Well - Actual SLB Surv	300.00	299.51	270.16	262.53	35.410	SF
ONION 1907-07H - VERDAD PR Well - Actual SLB Surv	0.00	1.00	278.11			
ONION 1907-07H - VERDAD PR Well - Actual SLB Surv	300.00	301.80	279.69	272.06	36.656	SF
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	194.91	195.93	289.47	281.91	38.323	CC
ONION 1907-08H - VERDAD PR Well - Actual SLB Surv	200.65	201.46	289.47	281.91	38.309	ES, SF
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	188.51	189.51	301.18	293.62	39.861	CC, ES
ONION 1907-09H - VERDAD PR Well - Actual SLB Surv	300.00	295.20	303.71	296.07	39.782	SF
1N-65W-12 SAFI 1224 PAD						
SAFI 1224-02H - Verdad PR Well - Actual SLB Surveys	9,766.70	18,366.00	449.18	145.18	1.478	Level 3, CC, ES, SF
SAFI 1224-04H - Verdad PR Well - Actual SLB Surveys	9,425.77	18,174.00	691.21	454.17	2.916	CC
SAFI 1224-04H - Verdad PR Well - Actual SLB Surveys	9,500.00	18,174.00	695.88	444.76	2.771	ES
SAFI 1224-04H - Verdad PR Well - Actual SLB Surveys	9,600.00	18,174.00	716.44	451.34	2.702	SF
SAFI 1224-06H - Verdad PR Well - Actual SLB Surveys	8,747.27	17,980.69	1,135.09	890.09	4.633	CC
SAFI 1224-06H - Verdad PR Well - Actual SLB Surveys	8,900.00	18,005.57	1,145.05	875.52	4.248	ES
SAFI 1224-06H - Verdad PR Well - Actual SLB Surveys	9,100.00	18,015.00	1,187.47	894.93	4.059	SF
SAFI 1224-08H - Verdad PR Well - Actual SLB Surveys						Out of range
SAFI 1224-10H - Verdad PR Well - Actual SLB Surveys						Out of range
SAFI 1224-12H - Verdad PR Well - Actual SLB Surveys						Out of range
SAFI 1224-14H - Verdad PR Well - Actual SLB Surveys						Out of range
1N-65W-24 Offsets						
Meehl 01N-65W-24-2N - Verdad SI Well - Actual Ensign	6,238.09	4,640.69	855.79	737.04	7.206	CC
Meehl 01N-65W-24-2N - Verdad SI Well - Actual Ensign	6,300.00	4,678.08	857.20	736.97	7.130	ES
Meehl 01N-65W-24-2N - Verdad SI Well - Actual Ensign	6,400.00	4,737.39	865.36	743.48	7.100	SF
1N-65W-25 Offsets						
HSR OLIPHANT #3-25 - Mountain Petroleum P&A Well -						Out of range
HSR-AMEN #11-25 - KMG P&A Well - No Surveys	12,200.00	6,959.00	1,438.65	1,048.44	3.687	SF
HSR-AMEN #11-25 - KMG P&A Well - No Surveys	12,500.00	6,959.00	1,386.31	1,019.79	3.782	ES
HSR-AMEN #11-25 - KMG P&A Well - No Surveys	12,596.43	6,959.00	1,382.95	1,024.78	3.861	CC
HSR-HAFFNER #2-25 - HSR P&A Well - No Surveys						Out of range
1N-65W-26 Offsets						
PARKER 10-26 - MTN P&A Well - No Surveys						Out of range
ROWE 01N-65W-26-8N - VERDAD PR Well - Actual Ens						Out of range
1N-65W-35 Offsets Incomplete						
DOUBLE J 35-11-1CDH - Providence Planned Well - BK						Out of range

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Reference Well:	CHIVE 2536-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan A	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Summary						
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Offset Well - Wellbore - Design						
1N-65W-36 Offsets						
ACCO TERRA STATE #18-36 - Kerr McGee PR Well - N	16,800.00	6,989.00	619.55	153.87	1.330	Level 3, ES, SF
ACCO TERRA STATE #18-36 - Kerr McGee PR Well - N	16,874.00	6,989.00	615.11	163.21	1.361	Level 3, CC
ACCO-TERRA-STATE ET AL #41 - Kerr McGee PR Well						Out of range
RUEBEL ET AL #36-1 - KPK PR Well - No Surveys						Out of range
STATE #36-2 - KPK P&A Well - No Surveys	18,700.00	7,007.00	485.65	-25.27	0.951	Level 1, ES, SF
STATE #36-2 - KPK P&A Well - No Surveys	18,768.39	7,007.00	480.81	-14.64	0.970	Level 1, CC

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Reference Well:	CHIVE 2536-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Plan A	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 20' @ 5031.00usft (RIG)

Offset Depths are relative to Offset Datum

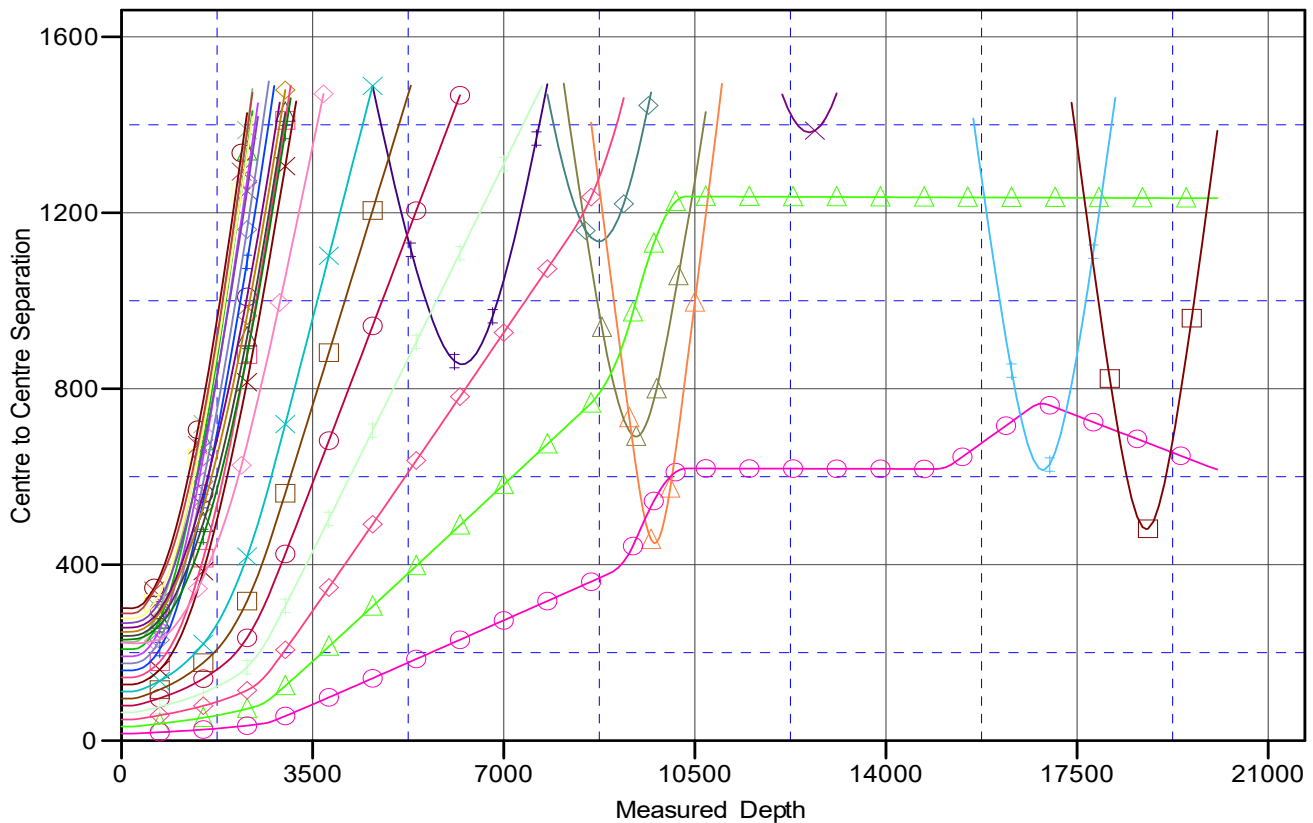
Central Meridian is -105.500000

Coordinates are relative to: CHIVE 2536-10H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

Ladder Plot



LEGEND

MEETH 01N-64W-24-2N, Verdard SI Well, Actual Ensign Surveys V0	CHIVE 2536 12H, Plan A, Design #1 V0	ONION 190708H, VERDAD PR Well, Actual SLB Survey V0
SAFI 122404H, Verdard PR Well, Actual SLB Surveys V0	SHALLOT 1930-24H, Plan A, Design #1 V0	ONION 190703H, VERDAD PR Well, Actual SLB Survey V0
SAFI 122406H, Verdard PR Well, Actual SLB Surveys V0	SHALLOT 1930-19H, Plan A, Design #1 V0	ONION 190705H, VERDAD PR Well, Actual SLB Survey V0
SAFI 122402H, Verdard PR Well, Actual SLB Surveys V0	CHIVE 2536 19H, Plan A, Design #1 V0	ONION 190701H, VERDAD PR Well, Actual SLB Survey V0
SHALLOT 1930-21H, Plan A, Design #1 V0	CHIVE 2536 11H, Plan A, Design #1 V0	ONION 190702H, VERDAD PR Well, Actual SLB Survey V0
CHIVE 2536 17H, Plan A, Design #1 V0	SHALLOT 1930-22H, Plan A, Design #1 V0	ONION 190706H, VERDAD PR Well, Actual SLB Survey V0
SHALLOT 1930-23H, Plan A, Design #1 V0	CHIVE 2536 13H, Plan A, Design #1 V0	ONION 190707H, VERDAD PR Well, Actual SLB Survey V0
SHALLOT 1930-20H, Plan A, Design #1 V0	SHALLOT 1930-18H, Plan A, Design #1 V0	ACCO TERRA STATE #18-36, Kerr McGee PR Well, No Surveys V0
CHIVE 2536 14H, Plan A, Design #1 V0	ONION 190709H, VERDAD PR Well, Actual SLB Survey V0	STATE #362, KPC P&A Well, No Surveys V0
CHIVE 2536 16H, Plan A, Design #1 V0	ONION 190704H, VERDAD PR Well, Actual SLB Survey V0	HSR-AMEN#11-25, KMG P&A Well, No Surveys V0

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Well Error:	3.28 usft	Output errors are at	2.45 sigma
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Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 20' @ 5031.00usft (RIG)

Offset Depths are relative to Offset Datum

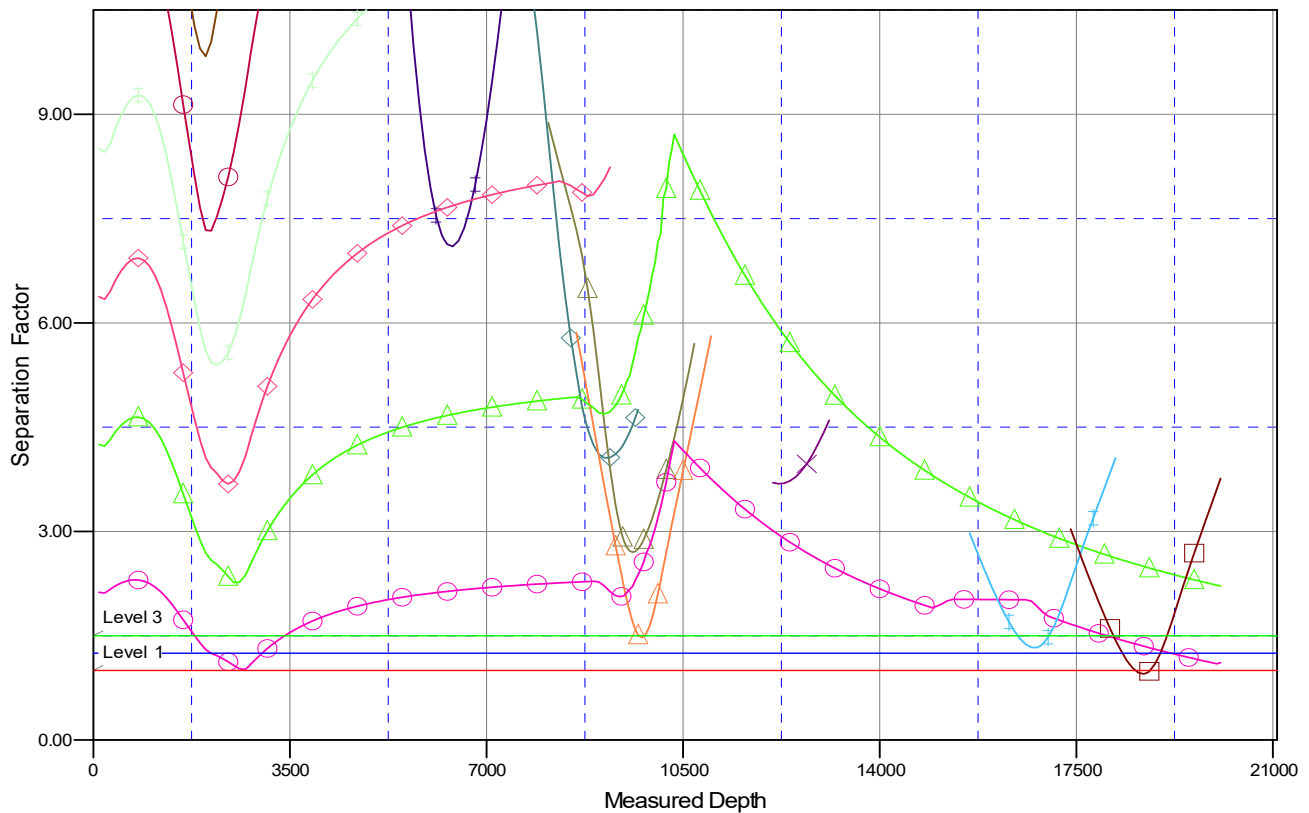
Central Meridian is -105.500000

Coordinates are relative to: CHIVE 2536-10H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

Separation Factor Plot



LEGEND

MEERH 01N-64W-24-2N, Verdard SI Well, Actual Ensign Surveys V0	CHIVE 2536 12H, Plan A, Design #1 V0	ONION 190708H, VERDAD PR Well, Actual SLB Survey V0
SAFI 122404H, Verdard PR Well, Actual SLB Surveys V0	SHALLOT 1930-24H, Plan A, Design #1 V0	ONION 190703H, VERDAD PR Well, Actual SLB Survey V0
SAFI 122404H, Verdard PR Well, Actual SLB Surveys V0	SHALLOT 1930-18H, Plan A, Design #1 V0	ONION 190705H, VERDAD PR Well, Actual SLB Survey V0
SAFI 122402H, Verdard PR Well, Actual SLB Surveys V0	CHIVE 2536 15H, Plan A, Design #1 V0	ONION 190701H, VERDAD PR Well, Actual SLB Survey V0
SHALLOT 1930-21H, Plan A, Design #1 V0	CHIVE 2536 11H, Plan A, Design #1 V0	ONION 190702H, VERDAD PR Well, Actual SLB Survey V0
CHIVE 2536 17H, Plan A, Design #1 V0	SHALLOT 1930-22H, Plan A, Design #1 V0	ONION 190706H, VERDAD PR Well, Actual SLB Survey V0
SHALLOT 1930-23H, Plan A, Design #1 V0	CHIVE 2536 13H, Plan A, Design #1 V0	ONION 190707H, VERDAD PR Well, Actual SLB Survey V0
SHALLOT 1930-20H, Plan A, Design #1 V0	SHALLOT 1930-18H, Plan A, Design #1 V0	ACCOTERRA STATE #18-36, Karr McGee PR Well, No Surveys V0
CHIVE 2536 14H, Plan A, Design #1 V0	ONION 190709H, VERDAD PR Well, Actual SLB Survey V0	STATE #362, KPK P&A Well, No Surveys V0
CHIVE 2536 16H, Plan A, Design #1 V0	ONION 190704H, VERDAD PR Well, Actual SLB Survey V0	HSR-AMEN#11-25, KMG P&A Well, No Surveys V0