ROGER L. MARTIN

INDEPENDENT PETROLEUM GEOLOGIST 316-250-6970

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY D & J OIL COMPANY, INC
LEASE WICKED WITCH #5
FIELD FIELD PRINT
LOCATION 2310' FSL & 330' FWL (NW-NW-SW/4)
SECTION 26 TOWNSHIP 21S RANGE 25W
COUNTY HODGEMAN STATE KANSAS

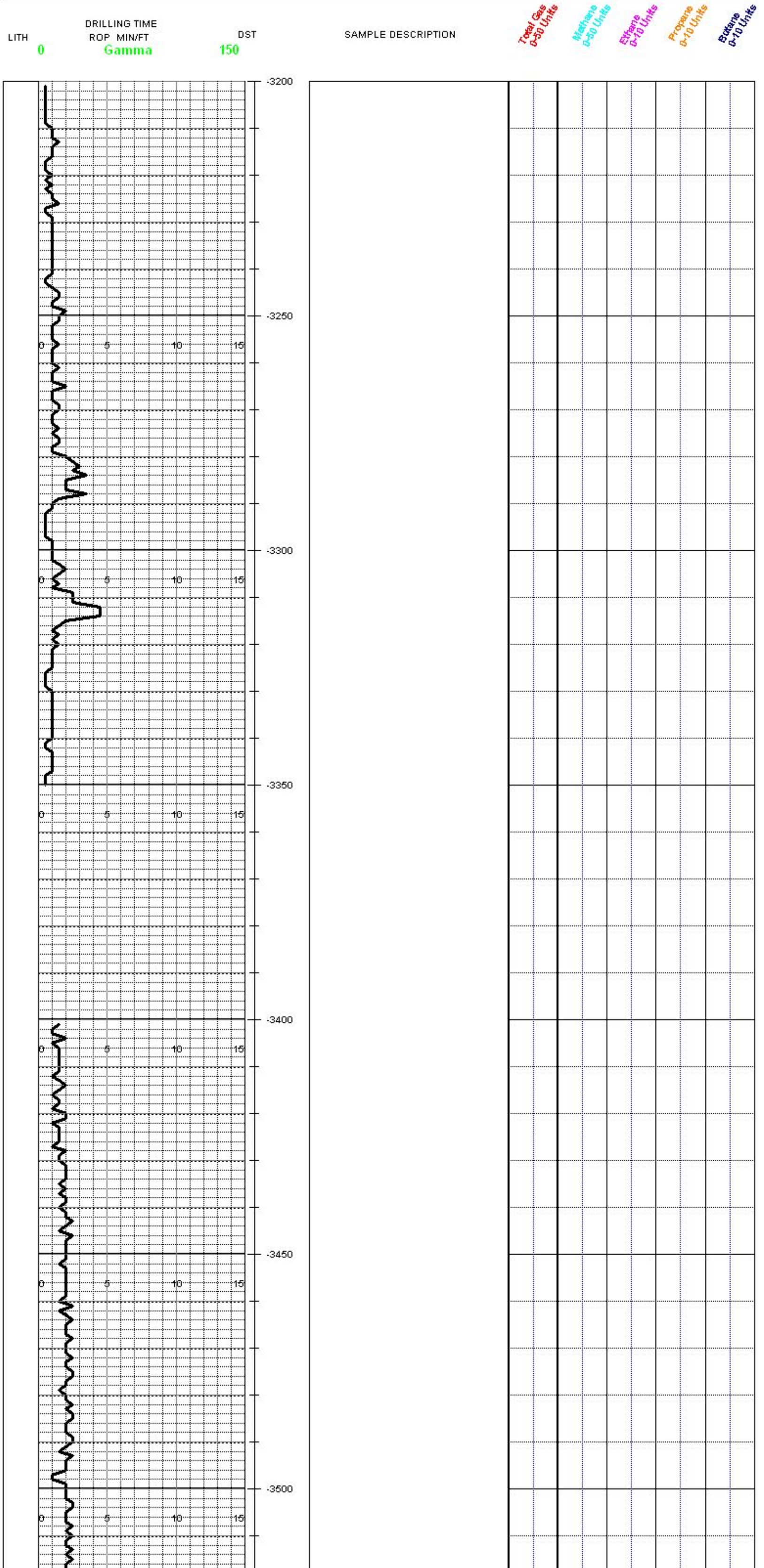
ELEVATIONS
KB 2464' GL 2459'
Measurements Are All From 2464'
API 15-083-21903-0000

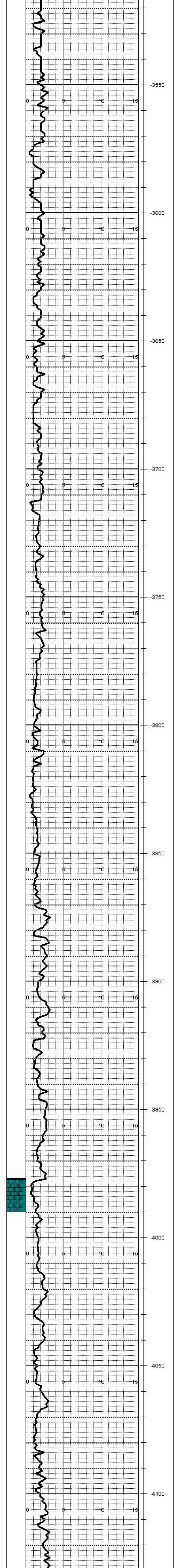
CONTRACTOR MURFIN DRLG. RIG #16
SPUD COMP
RTD LTD
ELECTRICAL SURVEYS

CASING
SURFACE
PRODUCTION

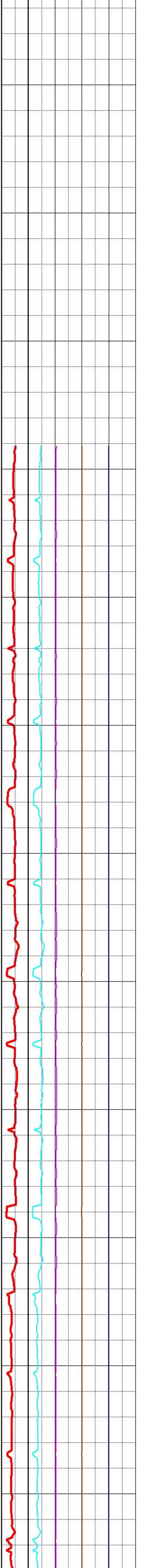
FORMATION TOPS	LOG	SAMPLES	CHRONOLOGY
			[redacted]

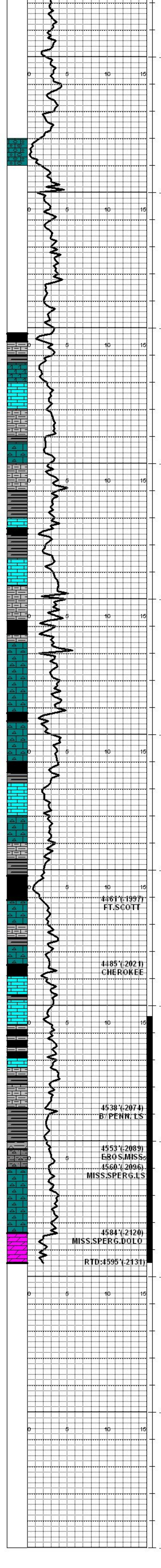
REMARKS: [redacted]





LS: gy-cm, microXln(mx) - VfnXln, profusely oomldic w/ Fr-VGd Porosity(Poro), sm dull MINRL.FLR; No Show(NS); No Cut(NC); Cherty.





LS: Prt oomldic & prt ool, to profusely oomldic w/ Fr-VGd Poro; w/ NS; NC; Cherty.

LS: lt-tn-gy, mx-VfnXln, sm dolomc, Fr InterXln Poro(IXP) w/ NS; NC; Sl Cherty.

LS: tn-gy-wh, pred dn Mdst; Vpr Poro to No Visbl Poro(NVP) NS; NC.

LS: tn-wh, pred dn Mdst, sm mx-fnXln, sm sl fos- Wkst-Pkst; Cherty; pr-Fr Poro w/ NS; NC.

LS: As Above(AA); pred dn Mdst; Vpr-NVP; NS; NC.

SH: V.gated; gy, & bk carb, & mrn-rd.

LS: tn-gy, pred dn Mdst; V.rare(Vrr) Wkst-Pkst; pr Poro- NVP; NS; NC.
SH: AA; incrs bk carb.

SH: AA; V.gated (Fr samples)

LS: tn-gy, pred dn Mdst-Wkst, Vrr Pkst; pr Poro-NVP; NS; NC; (Abndt SH: V.gated- AA- sm cavings; pr-Fr spls)

LS: tn-gy-bn, dn Mdst-Wkst; sl Chrty. Vpr-NVP; NS; NC.

SH: AA; incrs bk carb & gy.

LS: tn-gy-wh, pred dn Mdst-Wkst; sm prt chlky; Rare(Rr) Pkst w/ pr-Fr Poro; NS; NC; Cherty:tn-gy-wh, opq-transl; sharp-fresh.

LS: AA; pred dn Mdst-Wkst; Incrs Chert: rd-bn & gy, sharp fresh; Vpr Poro-NVP; NS; NC.
SH:AA; & bk carb.

LS: wh-chlky, & tn-cm, Rr Wkst-Pkst w/ pr-Fr Poro: I.Gr & IXP- sm mx-fnXln, w/ Vrr MdX-CrsX's-2nd ReX; NS; NC; Cherty:gy-wh-opq, shrp.

SH: gy-bk, gn-gy, mrn-rd; incrs bk carb.

LS: cm-tn-gy, pred dn Mdst to chlky; Rr Wkst-Pkst w/ Vpr-pr visbl Poro; NS; NC.

LS:AA; pred dn Mdst, sm sl 2nd ReX; pr visbl Poro- NVP; NS; NC; Cherty. (Fr samples to pr spls)

LS: tn-gy-wh, pred dn; sm argil-shly; pr Poro- NVP; NS; NC; (V.Abndt SH:AA)

SH: bk carb- V.carb, & gy-bk subcarb, & gn-gy.

{Ft.Scott} LS: gy-tn-wh, sm mottl'd, sm ool & fos- Pkst- Wkst, sm semichlky, pr Poro-NVP; NF; NS; NC; Pred dn Mdst; sl Cherty; Sm argil-shly LS w/ NVP; NS; NC; & SH:AA.

LS: gy-tn-cm, pred dn Mdst-Wkst; Vrr Pkst; Vpr visbl Poro-NVP; NS; NC; Cherty.

{Cherokee} SH: bk carb.
LS: tn-gy, dn Mdst, & mx-fnX; sm wh-chlky; Vpr-NVP; NS; NC;
& SH:AA.

LS: gy-tn-wh, sm mottl'd- Pkst- ool & fos w/ pr-Vpr visbl Poro; NS; NC; Rr wh-chlky;
& SH:AA, sl incrs bk carb- V.carb.

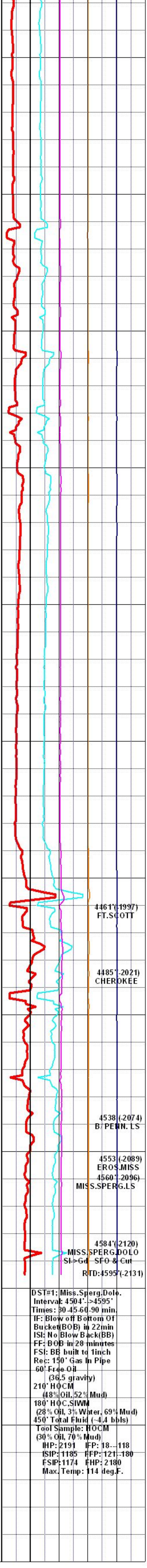
LS: gy-tn-wh, pred dn Mdst, Rr chlky, Vpr-NVP; NS; NC; Abndt SH:AA- sm cavings- (pr-Fr spls).

LS: tn-gy-wh, pred dn Mdst w/ Vpr-NVP; NS; NC; sm argil LS; (Trc prt oomldic LS:AA w/ Poro; NS; NC.

(4560'spl} Abndt LS: tn-wh, pred dn Mdst & chlky; V.rare(Vrr) fnX- 2nd ReX; sl Cherty; Vpr-NVP; NS; NC.

(4567'drlg.spl} V.Abndt V.gated SH;

(4567'drlg.spl.cont'd} sm LS: amber-tn, Wkst-Pkst; sm wh-chlky; Cherty; NS; NC {Eros.Miss.)
(4567'circ.spls} {Miss.Spergen} LS: tn-wh, amber-tn, pred dn Mdst-Wkst; Rare(Rr) Pkst; pr visbl Poro-NVP; NS; NC; V.rare dolomc LS: microXln(mx)-VfnXln; pr visbl Poro; NS; NC.
(4580'circ.spls} Abndt Miss.Sperg.LS: wh-tn-gy-mottl'd, Pkst; sm fn-MdXln-2nd ReX, Trc CrsX's- VCrsX's sm prt chlky; sm sl dolomc; pr visbl Poro-NVP; NS; NC; Cherty:AA.
(4590'circ.spls}(Abndt LS:AA) &~10%} MISS.SPERGEN DOLO: gy-tn w/ rich tn-bn O.STN; microXln-fnXln, sm sucro; pred pr-Fr visbl Poro: vug & fos.mold & IXP w/ spt'd to sat O.STN & yel-wh FLR; Sl-Fr Show Free Oil(SFO) on brk; & Sl-Fr Cut; sm Gd visbl Poro: IXP & vug & fos.mold, sat brt yel-wh FLR & rich tn-bn O.STN & Fr-Gd SFO & Cut; Frly Strong Odor. (4595'circ.spls} V.rare DOLO:AA; Sl incrs in % of sucro fnXln DOLO w/ Gd IXP & sat FLR & STN w/ Fr-Gd SFO & Cut; Fr Odor; (Abndt LS:AA & sm SH:AA in spls).



DST#1; Miss.Sperg.Dolo.
Interval: 4504'-->4595'
Times: 30-45-60-90 min.
IF: Blow off Bottom Of Bucket(BOB) in 22min
ISI: No Blow Back(BB)
FF: BOB in 28 minutes
FSI: BB built to 1inch
Rec: 150' Gas In Pipe
60' Free Oil
(36.5 gravity)
210' HOCM
(48% Oil, 52% Mud)
180' HOC,SIWM
(28% Oil, 3% Water, 69% Mud)
450' Total Fluid (~4.4 bbls)
Tool Sample: HOCM
(30% Oil, 70% Mud)
IHP: 2191 IFP: 18---118
ISIP: 1185 FFP: 121--180
FSIP: 1174 FHP: 2180
Max. Temp: 114 deg.F.